

INDIAN MINES ACT, 1923

ANNUAL REPORT

OF THE

CHIEF INSPECTOR OF MINES IN INDIA

FOR THE YEAR ENDING

31st DECEMBER 1939



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FROM

W. KIRBY, Esq., B. Sc., M. I. Min. E.,

CHIEF INSPECTOR OF MINES IN INDIA.

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,

DEPARTMENT OF LABOUR,

SIMLA.

Dated Dhanbad, the 17th May 1940.

SIR,

I have the honour to submit the report upon the inspection of mines in British India for the year ending 31st December 1939

INTRODUCTION.

The Indian Mines Act, 1923, applies to British India only and not to the Indian States. For the complete figures of production of all minerals raised from excavations of all depths in British India and the Indian States reference may be made to the statements of the "Mineral Production of India" published annually in the "records of the Geological Survey of India" and to the Quinquennial Review of the Mineral Production of India published every five years by the same Department. Detailed information of the mineral industries in Mysore—where the Kolar gold field is situated—and Hyderabad (Nizam's Dominions) is given in the annual reports of the Chief Inspector of Mines in those States.

Section I.—Persons Employed.

During the year 1939 the daily average number of persons working in and about the mines regulated by the Indian Mines Act was 305,344, as compared with 306,260 in the previous year. The decrease was 916 persons or 0.30 per cent. Of these persons 146,827 worked underground, 76,659

in open workings and 81,858 on the surface. The number of men who worked underground, in open workings and on the surface and the women who worked in open workings and on the surface, were as follows :—

	Men.		Women.	
	1939.	1938	1939.	1938.
Underground	146,827	140,651	..	..
In open workings	50,306	54,121	26,353	29,212
Surface	57,765	58,199	24,093	24,077
Total .	254,898	252,971	50,446	53,289

The daily average number of persons employed in coal mines was 201,989 which is 896 more than the number employed in 1938. Of these persons 53,639 were males employed in cutting coal, 33,820 were males employed as loaders of coal, and 23,004 were women.

The increase in the daily average number of persons employed in coal mines in 1939, as compared with 1938, is small, whereas the quantity of coal produced is lower.

Annual returns are now received of the number of persons actually at work and also of persons who should ordinarily have been at work but were absent on a selected day in February of each year. The returns relate only to coal mines. The day to which the returns apply must be the day of a week selected by the Chief Inspector in which there is the largest turn-out of workers. For February 1940, the week selected by me was as follows :—

Bengal, Bihar and Orissa	18th to 24th
Assam, Baluchistan, the Central Provinces and the Punjab	11th to 17th

Although these returns are for a day in 1940 they are included in this report as they would be more than a year out of date if held over till the submission of the report for the year in which they are made.

The returns for 1940 show that on the day selected 249,383 persons were either at work or were prevented from attending work. This figure is 14,380 less than the average number of persons employed in coal mines during 1939. Three of the important district comparisons are as follows :—

	Average daily attendance.	Attendance on selected day (absences) included.	Excess over average daily attendance	Percentage excess.
Jharia Coalfield	88,283	104,996	16,713	18.93
Raniganj Coalfield	68,676	85,820	17,144	24.96
Central Provinces Coalfield	14,869	18,274	3,405	22.90

Some of the percentages of absentees are as follows :—

All mines from which returns were received 7·0; Jharia 3·0; Raniganj 6·8; and the Central Provinces 6·1. It is probable that the reason for the low percentage of absentees in the Jharia coalfield is that a larger proportion of the labour force is resident at or near the mines than in the other areas. A detailed statement compiled from the returns is given in Appendix I, Table No. 1-A.

Figures showing the average output of coal per person employed are given below :—

	Tons of coal per person employed			
	Underground and in open workings.		Above and below ground.	
	1939.	1937-38.	1939.	1937-38.
British India	177	185	122	128
Bengal and Bihar	179	188	124	130
Assam	159	164	111	115
Baluchistan	50	36	46	35
Central Provinces	161	174	117	123
Orissa	199	180	102	133
Punjab	108	107	68	67

There was a general decrease in the average output of coal per person employed except in Baluchistan, Orissa and the Punjab. In comparing the figures with similar figures in other countries it should be remembered that both men and women are employed in Indian coal mines. In 1938, the output of coal per person employed above and below ground in the United Kingdom was 287 tons. In the same year, i. e., 1938, comparative figures in certain other countries were Japan 207 tons, France 193 tons, Germany 383 tons, and the United States of America 761 tons.

The number of persons employed in metalliferous (including mica, stone, clay and salt) mines was 103,355, which is 1,812 less than the number employed in 1938. 75,913 were men and 27,442 were women.

Bengal, Bihar and Orissa—The labour supply in the Bengal and Bihar coalfields was generally sufficient throughout the year, and the removal of women from the mines does not appear to have affected the output in any way. There was unfortunately a good deal of labour unrest chiefly in the Jharia coalfield and sporadic strikes of short duration occurred at several collieries. The standard of wages was comparatively high. Increments in wages have been granted at most collieries where such increases were warranted on account of the increase in cost of living caused by the outbreak of war.

The general health of the mining population in the Jharia and Raniganj coalfields was on the whole satisfactory. The death rate per thousand persons was lower in both the Raniganj and Jharia Mining Settlements.

Details of the activities of the Mines Board of Health in the Raniganj and Jharia coalfields are given in Section V of this report, from which it will be seen that the work of the Board is being satisfactorily maintained.

At the beginning of the year in the iron ore mines of Singhbhum district there was a large demand for iron ore and large quantities were mined and shipped, but early in the year a number of small iron ore mines in India continued

year. There was the usual shortage of labour during the harvesting periods. Wages were maintained at the previous year's standard and there was no serious labour trouble. There have been great improvements in housing conditions and facilities for education. An epidemic of meningitis commenced in the Noamundi iron mine in February 1939, and was not finally stamped out until November 1939. Altogether there were 72 cases, of whom 21 died and 51 were cured. Much assistance was received from the Tropical School of Medicine.

At the copper mines worked by the Indian Copper Corporation, Limited, in the Singhbhum district, operations were carried out throughout the year with the exception of a stoppage for two days due to the closing down of the Moubhandar generating plant which supplies the mine with power. This stoppage was due to a slow down strike on the part of the boiler plant operatives. The supply of unskilled labour is far in excess of the demand. There was no outbreak of epidemic disease.

At the mica mines of Chota Nagpur there was a sufficient supply of labour and the rates of wages were normal. Prices of all grades and qualities of mica rose during the year, mainly due to the increased demands from Europe and Japan. There were slight epidemics of cholera in some districts during the year.

Assam.—There was a sufficient supply of labour during the year. Apart from a strike of one day's duration there was no labour trouble. The incidence of malaria was slightly higher than in 1938, but there were no epidemic diseases and there was an improvement in the general health of the labour.

Central Provinces.—In the Pench Valley coalfield there was a shortage of labour from June to October. The rates of wages remained at the same level as in the previous year and the relations between the employers and labour were very good. The general health of the labour was, on the whole, good except for a severe recurrence of malaria during the latter months of the year. Anti-malaria measures were carried out during the year. The Messrs Shaw and the St. John Ambulance Association and last year sent three teams to compete in the Provincial competitions.

At the manganese mines in the Central Provinces the demand for manganese in 1939 exceeded that in 1938, probably due to the likelihood of war breaking out. The rise in prices towards the end of the year resulted in the reopening of a large number of small mines. The general health of the labour was good and there were no epidemic diseases during the year.

Punjab.—There was no change in the labour conditions and labour continued to be in excess of requirements. There were no epidemics and the health of the labour continued to be good. The Punjab Portland Cement Company, Limited, employ a full-time sanitary staff to supervise sanitary arrangements. As far as possible all labour with the exception of unskilled labour which comes from the surrounding villages, is accommodated by the company. It is found difficult to obtain fit labour from the surrounding villages and the doctor and his staff have visited a number of malaria cases in the villages during the year.

Madras.—Conditions in the mica trade continued to be good throughout the year. There was a plentiful supply of labour and the relations between employers and labour continued to be good. There were no strikes or epidemics during the year.

In the table on page 6 figures are given of the average daily wages paid in December in each important mining field in India. If the figures are compared with those in last year's Annual Report it will be seen that there was a small general increase in the wages paid to underground miners and to other classes of labour in practically all the coalfields.

Average daily earnings in December 1939.

Mineral Field.	UNDERGROUND.						UPPER WORKINGS.						SUMMARY.			
	Overmen and Siders Foremen and Males.		Miners.		Loaders.		Skilled Labour.		Unskilled Labour.		Overmen and Siders Foremen and Males.		Miners.		Loaders.	
	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
Jharia Coalfield (Dihar)	1 2 3	0 6 0	0 6 0	0 11 0	0 7 9	0 14 3	0 9 0	0 7 3	0 8 0	0 6 0	0 5 6	1 3 0	0 10 3	0 5 0	0 4 0	
Raniganj Coalfield (Hergal)	1 1 0	0 9 0	0 7 0	0 10 0	0 7 0	0 12 3	0 8 6	0 6 3	0 7 6	0 5 3	0 4 3	1 0 3	0 8 6	0 5 3	0 4 9	
Orissa Coalfield	3 4 6	0 10 0	0 11 0	0 13 3	0 8 3	.	..	.	0 7 0	..	0 3 0	1 14 0	0 14 0	0 8 0	0 4 0	
Assam Coalfield	1 0 6	1 0 0	1 0 3	1 1 2	0 13 6	1 3 6	1 1 0	0 12 9	0 15 0	0 11 9	0 8 0	1 13 6	0 14 0	0 11 6	0 7 9	
Funjab Coalfield	1 3 6	0 14 0	0 13 3	0 13 0	0 7 6	..	0 6 0	..	0 6 0	0 6 0	..	0 14 3	0 13 6	0 8 0	0 5 3	
Baluchistan Coalfield	1 0 3	0 8 0	0 10 0	0 9 0	0 7 0	..	..	..	.	..	..	..	0 6 3	0 6 9	..	
French Valley Coalfield (Central Provinces).	1 2 6	0 12 0	0 7 0	0 10 0	0 7 6	0 15 0	0 10 0	0 3 0	0 8 0	0 3 3	0 6 3	1 1 3	0 9 0	0 6 9	0 4 9	
Dihar Mica	0 11 3	0 7 0	..	0 7 9	0 5 6	0 6 6	0 6 0	..	0 8 0	0 4 3	0 2 8	0 14 0	0 6 0	0 6 6	0 4 0	
Madras Mica	0 6 0	0 6 3	..	0 5 6	0 4 6	0 7 0	0 5 3	..	0 4 0	0 4 3	0 2 8	0 11 9	0 6 3	0 5 3	0 3 6	
Central Provinces Manganes	0 15 0	0 7 0	..	0 10 9	0 0 3	0 14 0	0 5 3	..	0 10 0	0 4 0	0 6 3	1 3 3	0 12 0	0 0 0	0 6 3	
Central Provinces Limestones . . . . .	..	..	..	..	..	0 12 3	0 8 0	..	0 6 0	0 3 0	0 3 0	1 3 0	0 3 0	0 4 0	0 3 0	
Dihar Iron . . . . .	..	..	..	..	..	0 12 0	0 5 3	..	0 11 0	0 0 0	0 4 0	1 0 0	1 0 0	0 5 0	0 4 0	
Funjab Salt	0 1 0	0 2 0	..	1 1 0	0 11 3	..	..	..	..	..	..	0 13 0	0 12 3	0 7 3	..	
Dihar China clay . . . . .	..	..	..	..	..	0 6 0	0 3 0	..	0 4 3	0 3 0	0 2 0	1 3 3	0 5 0	0 3 6	0 2 9	
Funjab Slate . . . . .	..	..	..	..	..	0 9 0	0 7 0	..	0 0 0	0 4 6	..	0 13 0	0 11 0	0 0 0	..	
United Provinces Steins . . . . .	..	..	..	..	..	0 7 6	0 11 0	..	0 0 0	0 4 0	0 3 0	0 15 0	0 3 3	0 11 0	0 2 3	

Section II.—Output of Minerals.

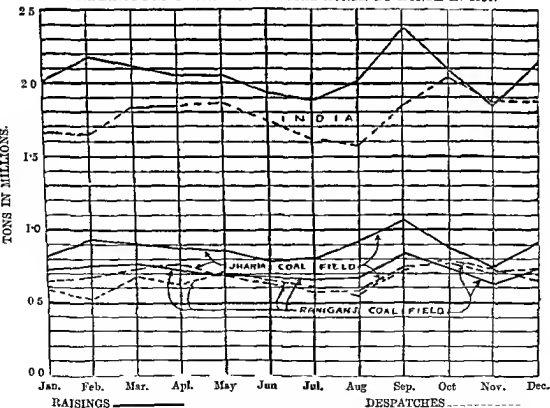
Output.—The statement given below shows the output of coal in the various provinces in British India during the years 1938 and 1939.

Output in tons.

	1939.	1938.
Assam	274,528	267,300
Baluchistan	16,213	14,399
Bengal	7,591,495	7,745,372
Bihar	14,784,916	15,362,601
Central Provinces	1,742,831	1,658,626
N.-W. F. Province	8	..
Orissa	53,087	44,423
Punjab	194,080	184,028
Total	24,662,788	25,276,743

The total output in 1939 was 24,662,788 tons of a declared value of Rs. 8,69,62,407. The decrease in the output was 613,955 tons, i.e., 2·43 per cent. and the decrease in the value of Rs. 76,65,458, i.e., 8·10 per cent. The opening stocks in 1939 were 2,092,337 tons and the closing stocks 2,377,881 tons. In the charts which appear below the raisings and despatches of coal are shown month by month :—

RAISINGS AND DESPATCHES OF COAL MONTH BY MONTH IN 1939.



It will be seen from the chart that, as usual, the output was highest in the months of February and September of the year. The fall of output in October and November was greater than usual due to the harvesting season.

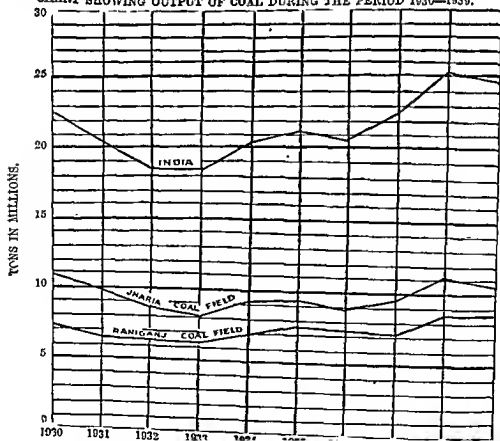
The output in Bihar decreased by 577,658 tons; there was an increase of 14,262 tons in the province of Orissa; and in Bengal there was a decrease of 153,877 tons. In the Central Provinces the output increased from 1,658,626 tons to 1,742,831 tons. There were increases of 10,052 tons in the Punjab, and 1,825 tons in Baluchistan. There was also an increase of 7,228 tons in Assam. In the North West Frontier Province 8 tons of coal were produced.

The figures of output for the principal coalfields are as follows:—

Coalfield.	1939.	1938	Percentage increase + or decrease —.
Jharia	10,529,159	11,144,462	—5.52
Raniganj	8,642,506	8,650,920	—1.25
Bokaro	1,983,564	2,007,016	—1.67
Giridih	695,879	636,371	+9.35
Karanpura	566,885	625,914	—9.43
Pench Valley	1,415,562	1,369,208	+3.38
Assam	274,528	267,300	+2.70

The output of the Jharia coalfield decreased by about 5½ per cent., the Raniganj coalfield decreased by about 1½ per cent., the Karanpura coalfield decreased by about 9½ per cent., and the output of the Assam coalfield increased by about 2½ per cent. There was an increase in the Pench Valley coalfield of the Central Provinces of about 3½ per cent. and in the Bokaro coalfield a decrease of 1½ per cent. In the Giridih coalfield the output rose by over 9½ per cent. The accompanying chart shows the variation of the output of coal during the period 1930-1939.

CHART SHOWING OUTPUT OF COAL DURING THE PERIOD 1930-1939.



Despatches.—The despatches of coal were 21,131,990 tons, and 1,519,400 tons, or 6·16 per cent. of the raisings were consumed on the collieries. The quantity of coal used for coking at the collieries was 1,425,851 tons, and 835,958 tons of soft coke and 110,742 tons of hard coke were made. There was a decrease, i.e. 0·55 per cent. in the quantity of soft coke manufactured at the collieries for domestic consumption. The quantity of hard coke made at the collieries is small. Most of the hard coke is made at coke-making plants which do not come under the Mines Act, and 1,639,976 tons of coal were despatched to coke-making plants of this kind in 1939. The quantity is 12,899 tons more than in 1938. Analyses of the figures relating to the output of coal and the manufacture of coke will be found in Appendix I, Table No. 3.

The despatches of coal for the year were more than those for 1938 by 375,623 tons. The stocks of coal at the collieries at the end of the year were more than at the beginning.

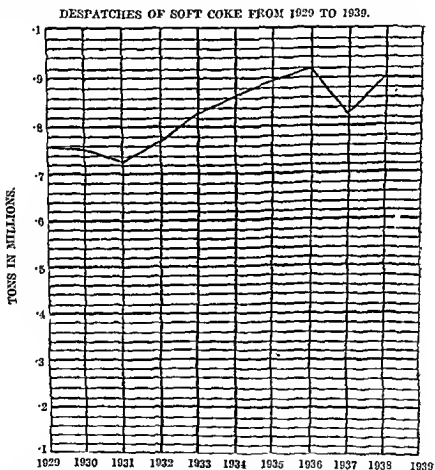
The following figures giving the average value per ton of coal put into wagons in various districts may be of interest.—Assam, Rs. 8 annas 6·8; Baluchistan, Rs. 6 annas 9·6; Bengal, Rs. 3 annas 12·3; Bihar (Jharia coal-field), Rs. 3 annas 3·3, Central Provinces, Rs. 3 annas 10·4; Orissa, Rs. 3 annas 0·4, North-West Frontier Province, Rs. 5 annas 4·0, and the Punjab, Rs. 5 annas 0·4. There was an all-round decrease in the average value per ton of coal. In Assam it was Rs. 1 annas 3·7; in Baluchistan, annas 2·9; in Bengal, annas 10·6; in Bihar, Rs. 1 annas 6·3; in the Central Provinces, annas 4·8; and the Punjab, annas 12·2, respectively.

Trade Conditions.—The market opened firm at the beginning of the year and prices were steady until the end of May, when the recurring annual wagon difficulty ceased and supplies were made in full against colliery indents. Demand then shewed a considerable falling off, and in August prices had fallen considerably. Stocks began to accumulate at collieries and some concern was felt at the downward trend of prices. The outbreak of war however resulted in a sustained demand for coal and at the end of the year prices were more or less on the same level as in January, with stocks being rapidly cleared. This demand taxed the capacity of the railways to handle the traffic, with the result that from September on the East Indian Railway and from November on the Bengal Nagpur Railway wagon supplies were severely restricted for public loading, whereas under normal conditions such restrictions do not arise until the end of the year.

The export demand, particularly to the Far East continued to shew the improvement noted in the previous year, and although between September and November coal freights shewed an appreciable increase demand continued to be brisk.

Coal Grading Board and Soft Coke Cess Committee—During the year the Coal Grading Board continued to maintain the same standard of good work as in previous years and the quality of export coal was generally satisfactory. 2,628,532 tons of coal were exported under the supervision of the Board during the year, as against 2,206,841 tons in the previous year, or an increase of 421,691 tons.

The Soft Coke Cess Committee continued to work on the same lines as in former years. Propaganda for popularising soft coke as domestic fuel was carried out vigorously. The arrangement for the inspection of loading soft coke wagons at the collieries was maintained and experiments for the improvement in the quality of soft coke were continued. During the year the prices of soft coke remained high. Approximately 888,982 tons of soft coke were despatched from the coalfields during the year, as compared with 889,671 tons during the year 1938. Out of the output for 1939, 855,915 tons were despatched from mines in the Jharia coalfield. The accompanying graph shows the development of the soft coke industry during the last ten years :—



Use of Electricity both at Coal Mines and at other mines.—The number of coal mines using electrical energy was 144, as compared with 136 in 1938, and 124 in 1937, and the aggregate horse-power employed at coal mines increased from 98,077 to 104,000, i.e., by 6.05 per cent. The increase is due chiefly to the increased horse-power of motors installed in the Raniganj coalfield. During the year electrical plant was installed and brought into operation in seven additional mines, and of mines using electricity one was re-opened.

Electricity was used in 22 metalliferous mines and the aggregate horse-power employed was 8,107, as against 7,751, in the previous year

Statistics of the electrical plant in use at mines in the various provinces of British India and in certain mine fields are contained in Appendix I, Table Nos. 7, 8 and 9.

During the year there were three serious and two fatal accidents due to electricity; one fatal accident occurred below ground and the other one on a surface transmission line.

Explosives.—During the year 3,500,376 lb. of gunpowder, 81,339 lb. of high explosives, and 260,403 lb. of "permitted" explosives were used at coal mines. These figures compare with 3,479,883 lb. of gunpowder, 93,788 lb. of high explosives, and 290,131 lb. of "permitted" explosives used in 1938. In addition, 79,869 lb. of liquid oxygen explosives were used. These explosives were used in quarries in the Bokaro coalfield. A statement of the kind and quantity of explosives used during the year in the different kinds of mines under the Act is given in Appendix I, Table No. 12

Coal Cutting Machines.—The number of coal cutting machines used was 203, as compared with 186 in 1938, and 140 in 1937. All the machines were worked by electricity. 56 machines were at work in the Jharia coalfield, 130 machines in the Raniganj coalfield, 2 machines in Karanpura coalfield, 1 machine in Giridih coalfield, 2 machines in Bokaro coalfield, and 12 machines in the Central Provinces and Berar. During the year there has been an increase of 15 machines in the Raniganj coalfield. Coal cutting machines were in use in 72 mines against 66 in 1938, and 50 in 1937. Besides coal cutting machines 6 pneumatic picks worked by compressed air were in use in one mine. The total area undercut was 10,816,032 square feet, as compared with 8,827,200 square feet undercut in 1938. It is evident that there has been a steady increase in recent years in the getting of coal by mechanical means

Mechanical Ventilators—In Appendix I, Table No. 10, particulars are given of the number of mechanical ventilators in use in coal mines under the Act. In 1939, 139 mechanical ventilators were in use, the number being 128 in the previous year.

Safety Lamps.—In Appendix I, Table No. 11, particulars are given of the number of safety lamps in use in coal mines under the Act. 47,640 safety lamps were in use in 1939, as compared with 46,520 in 1938

IRON ORE

The production of iron ore was 1,513,934 tons, valued at Rs. 29,34,779, as compared with 1,421,090 tons, valued at Rs. 26,89,996 in 1938

MANGANESE ORE.

There was a decrease of 97,321 tons in the output of manganese ore, the figures of production being 669,020 tons, valued at Rs. 98,06,630, as

compared with 766,341 tons, valued at Rs. 1,23,81,646 in 1938. The average reported value per ton of manganese ore produced fell from Rs. 16.16 in 1938 to Rs. 14.66 in 1939. The corresponding value in 1937 was Rs. 15.13. The Central Provinces Manganese Ore Company, Limited, despatched a total of 540,598 tons as follows.—235,591 tons to Calcutta; 53,996 tons to Bombay; 210,647 tons to Vizagapatam; and 40,364 tons of other sales on f. o. r. basis. The quantity despatched in 1938 was 362,588 tons, so that the increase in despatches in 1939 was 178,010 tons. The average f. o. b. price was 10.52 annas per unit, as compared with 10.66 annas per unit in 1938.

CHROMITE ORE.

The production of chromite ore was 18,428 tons, valued at Rs. 3,08,648, as compared with 27,086 tons, valued at Rs. 4,25,942 in 1938.

COPPER ORE.

The output of copper ore was 360,216 tons, valued at Rs. 47,87,540, as compared with 288,076 tons, valued at Rs. 32,40,640 in 1938. The whole of the production came from the mines belonging to the Indian Copper Corporation, Limited, in the Singhbhum district in Bihar. The production of refined copper amounted to 6,535 tons, as compared with 5,330 tons in 1938.

MICA.

The quantity of mica consigned was 104,575 cwt., valued at Rs. 49,49,848, as compared with 101,633 cwt., valued at Rs. 40,89,448 in 1938. The output of dressed mica in 1939 was 110,714 cwt., as compared with 108,835 cwt. in 1938. In addition, 13,023 cwt. of waste mica fit for "splittings" valued at Rs. 63,196, were consigned from Nellore district, 352 cwt., valued at Rs. 685, from Salem district, Madras Presidency, and 937 cwt. valued at Rs. 277 from Ajmer-Merwara district in Rajputana. The output of this kind of mica was 14,926 cwt.

The quantities of mica and "splittings" shipped in 1938 and 1939 were as follows:—

	Cwt.	Rs.
1938	79,621	95,85,168
1939	94,799	126,64,919

In addition 72,235 cwt. of "pattern cut" and scrap mica, valued at Rs. 3,05,191, were shipped, as compared with 63,161 cwt., valued at Rs. 1,00,019 in 1938.

ROCK-SALT.

The production of rock-salt was 165,950 tons, as compared with 164,674 tons in the previous year.

LIMESTONE.

The reported production of limestone was 1,515,690 tons, valued at Rs. 13,62,159 as compared with 1,582,058 tons, valued at Rs. 17,09,905 in 1938.

STONE.

Returns were submitted by the owners of one hundred and twenty-one stone mines, and the figures of production were as follows —1,702,304 tons of igneous rock, 30,888 tons of sandstone, 53,285 tons of gravel; and 15,898 tons of murrum. The total production was 1,802,375 tons, as compared with 1,566,688 tons in 1938.

CLAYS.

From the thirty-three clay mines from which figures were obtained 53,862 tons of fire-clay, 14,026 tons of China-clay and 77,355 tons of ordinary clay were produced.

OTHER MINERALS.

The production of other minerals were as follows.—5,527 tons of hauxite, valued at Rs. 9,374; 8,988 tons of slate, valued at Rs. 1,99,947; 29,903 tons of magnesite, valued at Rs. 1,79,079; 18,030 tons of gypsum, valued at Rs. 85,665; 6,216 tons of barytes, valued at Rs. 41,914; 2,774 tons of steatite, valued at Rs. 14,049; 258 tons of ochre, valued at Rs. 2,635; 293 tons of felspar, valued at Rs. 2,392; 182 tons of apatite, valued at Rs. 910; and 773 tons of kyanite, valued at Rs. 11,523. Small quantities of asbestos, beryl, corundum, garnet, graphite and fuller's earth were also produced.

SECTION III.—ACCIDENTS.

During the year 1939, at mines regulated by the Indian Mines Act, 1923, there were 266 fatal accidents which is 18 more than in 1938, and 56 more than the average number in the preceding five years.

In addition to the fatal accidents there were 1,380 serious accidents, involving injuries to 1,410 persons, as compared with 1,165 serious accidents, involving injuries to 1,196 persons in the previous year. The so-called "serious" accidents reported are those in which an injury has been sustained which involves, or in all probability will involve, the permanent loss of or injury to the sight or hearing or the fracture of any limb or the enforced absence of the injured person from work for a period exceeding twenty days. Two hundred and eighty-six persons were killed and 1,447 persons were seriously injured. The latter figure includes 37 persons injured in fatal accidents. The number of persons killed was 3 more than in 1938. 278 persons killed were men and 8 were women. In one case 3 lives and in eighteen cases 2 lives were lost.

The proportion of accidents which occurred to men underground, in open workings, and on the surface and to women in open workings and on the surface were as follows :—

—	No. of fatal accidents	No. of men killed	No. of women killed.	Death rate per 1,000 persons employed.		No. of serious accidents.	No. of men injured.	No. of women injured.	Serious injury rate per 1,000 persons employed	
				Men.	Women				Men	Women.
Underground	223	212	..	1.05	.	1,005	1,035	..	7.05	..
Open workings	20	23	3	0.46	0.11	90	72	20	1.43	0.75
Surface.	17	13	5	0.23	0.21	235	244	39	4.22	1.62

There was a decrease in the death rate of men employed underground and on the surface and an increase in open workings. With respect to women there was an increase in the death rate in open workings and on the surface. The causes of the fatal accidents have been classified as follows :—

	No. of fatal accidents	Percentage of total number of fatal accidents.
Misadventure	209	78.57
Fault of deceased	22	8.27
Fault of fellow workmen	6	2.26
Fault of subordinate officials	16	6.01
Fault of management	10	3.76
Faulty material	3	1.13
Total	266	100.00

There was an increase of 3 in the number of persons killed during 1939, as compared with 1938.

I have analysed the serious accidents and find that out of the total of 1,447 persons seriously injured 2 were permanently and totally disabled; 56 were permanently partially disabled, and 1,389 were only temporarily disabled.

In addition, it was reported that 10,584 persons received minor injuries which necessitated the enforced absence from work for a period exceeding forty-eight hours.

Explosions and ignition of fire-damp and coal-dust.—There was one serious accident by an ignition of fire-damp.

Falls of roof and sides.—Falls of roof and sides caused 164 fatal accidents and 306 serious accidents. As compared with the figures under this head in

the previous year the total number of accidents increased from 386 to 470; the number of persons killed increased from 166 to 180; and the number of persons seriously injured increased from 270 to 311. In three cases two lives were lost in depillaring areas; also in five cases two lives were lost in galleries by falls of roof. The accidents by falls of sides include one in which two persons were killed in open workings; in two cases two lives were lost in depillaring areas; and in two other cases two lives were lost in galleries.

In Shafts—There were 14 fatal accidents and 34 serious accidents in shafts, as compared with 15 fatal accidents and 33 serious accidents in the previous year.

Suffocation by gases—There was one fatal accident by suffocation by gases.

Explosives.—There were 16 fatal accidents and 28 serious accidents caused by explosives. In the previous year the figures were 10 and 38, respectively.

Haulage—There were 38 fatal accidents and 280 serious accidents on haulage roads. The accidents due to haulage have been classified as follows:—

Classification.	Fatal.	Serious.	Total.
Haulage rope breaking . . . . .	..	1	1
Coupling chains and hooks breaking	2	..	2
Drawbars breaking	1	..	1
Couplings becoming detached	10	3	13
Riding on sets (authorised)	1	11	12
Riding on sets (unauthorised)	3	2	5
Allowing tubs to run uncontrolled	3	11	14
" " " " " " " " " " " " "	1	50	60
" " " " " " " " " " " "	1	24	25
" " " " " " " " " " " "	3	35	38
" " " " " " " " " " " "	2	22	24
or tramming levels	1	20	21
Crushed against tubs, sides of roadways, doors, etc.	2	13	15
While spragging moving tubs	2	12	14
Unclassified	6	67	73
Total	38	280	318

five years —

	Fatal.	Serious
1915	20	161
1936	24	189
1937	32	218
1938	40	257
1939	38	280

As pointed out in my Annual Report for last year, there has been a steady increase in the number of fatal and serious accidents, and as indicated in previous reports many of these accidents could have been prevented by better supervision; suitable haulage roads and gear and greater care on the part of persons employed on haulage roads.

There has been a decided reduction in the number of accidents under the first three headings in the classification of haulage accidents, there being 4 in 1939, as compared with 6 in 1938. As these types of accidents are often attended with serious results this is a very welcome improvement.

There was a regrettable increase in the accidents due to couplings becoming detached. Out of 10 fatal accidents under this heading, 8 resulted from the use of defective types of couplings. It is, therefore, evident that a number of these accidents could have been avoided by using suitable types of couplings, as recommended in my Annual Report for 1938, and I trust that mine officials will give this matter their very serious attention with a view to reducing this type of accident.

Although the number of fatal accidents resulting from set riding was the same as in the preceding year, there was a reduction in the serious accidents from this cause. Three out of the four fatal accidents under this heading occurred due to unauthorised riding on sets which could have been avoided by stricter supervision on the part of the subordinate officials.

There was an appreciable decrease in the number of accidents, both fatal and serious, resulting from tubs being allowed to run uncontrolled. In my Annual Report for 1938 a sketch of an interlocked stop-block and runaway switch was given and it is hoped that the use of this appliance at the top of haulage inclines will be further extended, and as a result accidents under this heading be reduced.

There was the same number of accidents from hand tramming during 1939 as in 1938. A large number of these accidents was caused by hand-trammed tubs overtaking and injuring persons pushing tubs in front. If precautions are taken to keep the tubs under control, specially where gradients are undulating, and by the trammers exercising greater care, this type of accident will, to a large extent, be avoided.

There was a considerable increase in the number of accidents from guiding tubs on curves, there being 25 in 1939 and 11 in 1938. Most of these accidents were due to defective tracks. If the tracks at curves are properly laid and fitted with check and guide rails, and a sufficient number of properly spaced pulleys are fixed on curves, this type of accident will be greatly minimised.

The accidents following derailments and re-railing tubs reveal an appreciable improvement, there being 38 accidents, as compared with 63 in the previous year. As derailments are chiefly caused by badly laid tracks, specially at crossings and the junction of haulage roads, badly designed curves, dirty roads and badly maintained tubs, it is obvious that a great improvement could be effected by devoting more attention to these matters.

The number of accidents to persons while resting on or loitering about the haulage roads and tramming levels increased from 18 to 21. Many of these accidents are avoidable by adopting precautions to prevent persons inadvertently going on to haulage roads by the use of gates on working levels where persons are employed. Stricter supervision on the part of the subordinate officials by their insisting that work-persons shall not

proceed beyond a gate or fence as referred to above would assist considerably in reducing the number of this type of accident.

The accidents under the heading "unclassified" have considerably increased. Several serious accidents under this heading were caused at the time of cleaning haulage roads or friction rollers when the rope was in motion. Obviously such work should be done when the rope is not in motion.

Underground Machinery.—Two fatal and 28 serious accidents were caused by underground machinery.

Sundries Underground.—Fifteen fatal accidents and 417 serious accidents were due to miscellaneous causes underground.

Surface Machinery.—Two fatal accidents and 21 serious accidents were caused by surface machinery.

Surface Railways and Tramways.—Eleven fatal accidents and 156 serious accidents took place on surface railways and tramways.

Electricity.—There were one fatal accident and 3 serious accidents attributable to the use of electricity.

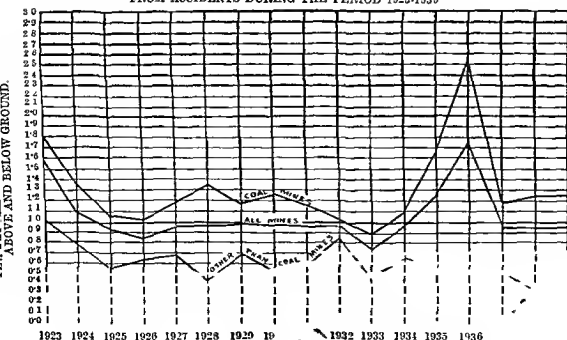
Miscellaneous on the Surface.—Two fatal accidents and 107 serious accidents of this kind took place on the surface.

Accidents excluded from the statistics.—Sixteen accidents causing 18 deaths and injury to one person were excluded from the statistics for reasons which are given in Appendix II.

Death rate.—The death rate per thousand persons employed above and below ground was 0.94 which was more than the rates in 1937 and 1938. The average rate for the preceding five years was 1.15. At coal mines the rate was 1.23, as compared with 1.23 in 1938. At mines other than coal mines the rate was 0.36, as compared with 0.33 in 1938.

The chart below shows graphically the variations in the death rate during the period 1923-39:—

CHART SHOWING THE DEATH RATE
FROM ACCIDENTS DURING THE PERIOD 1923-1939



From the above it will be seen that except for coal mines the death rate has risen. The high death rate in 1936 was due chiefly to an explosion in a coal mine which caused the loss of 209 lives.

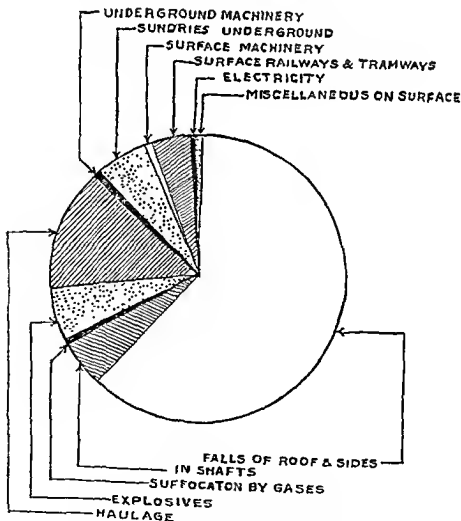
The death rate per million tons raised at coal mines was 11.76, while that of the preceding five years was 11.90.

Deaths occurring in each class of mines were as follows:—249 in coal mines, 1 in an iron ore mine, 13 in mica mines; 5 in limestone mines; 4 in stone mines, 1 in a copper mine; 2 in chromite ore mines; 2 in salt mines, 7 in manganese mines; 1 in a slate mine; and 1 in a fire-clay mine.

Ninety-five persons lost their lives by falls of roof; 85 by falls of sides; 14 in shafts, 17 by explosives, 1 by suffocation by gases; 40 by haulage; 1 by electricity 18 by other accidents underground; and 15 on the surface.

The accompanying chart shows the relative importance of the various causes of accidents in coal mines during 1939.

CHART SHOWING
DISTRIBUTION OF CAUSES OF PERSONS KILLED IN AND ABOUT COAL MINES
IN THE YEAR 1939.



A list of the fatal accidents, appears in Appendix II, Table I, where each is briefly described. The details of certain accidents are reported at greater length as follows:—

FALLS OF ROOF

No. 40—*The Equitable Coal Company, Limited's* Beydih coal mine.

(Two persons killed.)

This accident occurred in a depillaring section of the Di-hergarh seam, 14 feet thick, and lying at a depth of 1,500 feet.

A gang of six miners, including deceased was employed in cutting and
and on completing
"hump" occurred
the death of two
persons. This fall took place more than 200 feet from the edge of the goaf.
Chocks and props had been set in the level where the fall occurred but a
number of props were knocked out by the fallen roof coal.

My remarks relating to "lumps" in connection with another accident by a fall of side at Dhemo Main mine are applicable to this and other similar accidents.

No. 74.—*The Eastern Coal Company, Limited's Amhabad coal mine.*

(Two persons killed)

This accident occurred while machine cut coal was being loaded in a gallery, 7 feet high, and the place of accident is indicated in Plan No. 1

The Inspector of Mines, No. 1 Circle, who enquired into this accident stated that a gang of eight loaders went to work in the place of accident and after shots were fired on the day previous to the accident, the "faces" were dressed. The "faces" were also again dressed on day of accident. About half an hour before the accident the sirdar inspected the place, tested the roof and found it safe. The "shp" at the right hand side of the gallery was revealed and that at the left side had not been exposed. The "shp" at the right hand side was running almost parallel with the centre line of the gallery and several sprags had been set to the side. The eight loaders were loading coal when they heard a cracking sound in the roof and small stuff falling. They started running out of the gallery, when a mass of coal, 20' x 9' x 3', fell from between two converging "shps" in the roof, killing the two deceased instantly. The fall revealed another shp just inside the left side of the gallery which converged in the roof towards the other "shp". The under-cutting and blasting in the new rise gallery on the left side as shown on the plan was a factor which contributed to the fall.

The Inspector of Mines, on commenting on this accident remarks that "where a 'slip' running parallel to or almost parallel to a side of a gallery has been revealed it is always advisable to take precautionary measures by erecting a row of props to secure the roof even when the roof sounds secure. In the past many such accidents have occurred in India and this precautionary measure under similar circumstances is strongly recommended".

FALLS OF SIDE.

No. 151.—*The Hazaribagh Mica Mining Company, Limited's Sarlaya (prospect-
ing pit) mica mine.*

(One person killed.)

This accident occurred in a shallow prospecting pit, 7'×5'×6' deep
quality of the mica. On day
us companion had worked in the
the manager, when a mass of
side fell and deceased sustained fatal injuries.

A number of accidents have occurred in the past due to persons working in old abandoned prospecting pits, and it is considered that these shallow excavations should be filled in, not only to prevent illicit working but also to avoid accidents due to persons inadvertently falling into these pits.

No. 153.—*The Dhemo Main Collieries Limited's Dhemo Main coal mine.*

(Two persons killed and one injured.)

This accident occurred during depillaring operations in the Dishergarh seam which is 13'—6" thick and lies at a depth of 1,800 feet. Plan No. 2 indicates the place of accident

The area of extraction measured about 3,800 feet on the strike and 500 feet on the dip. During the second relay on the day of accident a gang of miners was employed to drive a "split" gallery in the pillar "P". At about 11 p m. there was a severe "bump" which caused large masses of coal to fall from the sides of pillars as shown in the plan, resulting in the death of two persons and serious injuries to another. Great clouds of coal-dust were raised in the air and although the miners had electric lights they could not see because the dust was so dense.

During the year several accidents due to "bumps" have occurred at this and other mines working the Dishergarh seam at great depths. Above the Dishergarh seam there is usually a few feet of shale and above this shale is a hard sandstone of considerable thickness. Generally, it is found that "bumps" are likely to occur when the "cover" is in the region of 1,000 feet and over, and where there is a strong stratum, e.g., sandstone immediately above or within a few feet of the coal seam. When these strong massive strata begin to break up after large areas of coal have been extracted, depending on the depth of the "bumps" are likely to occur, producing "bumps" which are usually transmitted or "bumps" which are usually transmitted in extensive falls of side and roof. Gas

"Bumps" should be distinguished from ordinary "weighting" due to pressure being thrown on to the working "face" or the pillars in the vicinity during depillaring operations, and which might result in minor falls of roof and sides. "Bumps" as previously pointed out are caused by the breaking up of strong massive super-incumbent strata at considerable depths and the effects of "bumps" are transmitted over large areas and are sometimes so violent as to raise dense clouds of coal-dust and extinguish flame safety

lamps. As the area of extraction increases and the stage approaches when a "break" of the main roof is likely to take place the frequency and severity of "bumps" are likely to increase.

To mitigate the effects of "bumps" conditions at each mine should be carefully studied and precautions taken accordingly. For instance if the roof immediately above the coal is sound it would be unsound practice to leave roof coal which would be likely to fall and endanger workers when any "bumps" occur. On the other hand if the immediate roof is unsound and it is necessary to leave some roof coal as a support then this roof coal should be adequately supported by "chocks" set at short intervals to prevent roof coal collapsing if a "bump" with the accompanying "shock waves" should occur. It is also essential, as far as practicable, to avoid leaving small pillars or "stooks" behind in goaves so that the main roof may be allowed to settle down evenly. A consideration of the direction of the working "faces" in conjunction with "cleavages" in the roof is of importance, and in some cases a "diagonal" or an inclined "face" has been found to be the most suitable. The management of each mine where "bumps" are likely to occur, should consider the prevailing conditions at their particular mine and arrange the direction of the working "faces" accordingly.

EXPLOSIVES.

No. 188.—*The Sone Valley Portland Cement Company, Limited's Bhangia Gursote limestone mine.*

(One person killed.)

This accident occurred in a limestone quarry and it was the practice to conduct blasting operations during the "rest interval", i.e., from 11 a.m. to 1 p.m., under the direct supervision of the supervising staff.

On day of accident all the work-persons retired as usual to their places of shelter at 11 a.m., as blasting operations were about to be commenced. The shot-firer charged three holes in one of the "benches" of the quarry, and the deceased quarry-assistant and the mining sirdar were standing at distances of 280 feet and 300 feet, respectively from the place where the shots were to be fired. After giving proper warning the shot-firer ignited the shots and proceeded to his place of shelter. Unfortunately, deceased was standing directly exposed to the shots and when the third shot exploded it projected a piece of stone which struck him inflicting serious injuries to which he succumbed the next day. Deceased was an experienced assistant and it was an error of judgment on his part to stand so near to the place where the shots were fired. It is considered that he should not have remained within 600 feet from the point of blasting without taking proper shelter. If it is not possible for the persons supervising blasting operations to retreat to a place not less than 600 feet from the point of blasting, it is very necessary that they should take shelter behind a barricade or some other suitable structure.

In the past a number of accidents have occurred by pieces of stone projected from shot-holes during blasting operations in open quarries, and persons have been killed or injured up to a distance of nearly 600 feet. It is

essential, therefore, that shot-firers and supervisors should not remain within a distance of 600 feet where shots are fired unless suitable shelters for their protection are provided

HAULAGE.

No 203 —Kumar Sarat Kumar Roy's Isabella coal mine.

(One person killed.)

This accident occurred at the end of a haulage road where tubs were loaded from a depillaring area, and the gradient varied from about 1 in 10 to about 1 in 15. At the time of the enquiry into this accident it was disclosed that while deceased was crossing the bottom of the haulage line he was struck and fatally injured by a runaway empty tub. Nine tubs were being lowered on the haulage road, and where the gradient decreased from 1 in 10 to about 1 in 15, two hookmen had to jerk the rope in order to help the tubs to pull the rope out to the end of the haulage line. While they were doing this, the first tub of the set became uncoupled and ran amain.

This enquiry revealed that the type of coupling in use was unsatisfactory and the drag was also unsuitable. After the accident a suitable type of

not already being used.

It is also considered that on undulating gradients where there is any likelihood of tubs becoming uncoupled "safety chains" or ropes should be used on the set so that in the event of one or more tubs becoming detached they are not free to run away. This precautionary measure is being taken at a number of mines.

No. 210 —The Jinagora (East Bararee) Colliery Company, Limited's Jinagora (B. Section) coal mine.

(Two persons killed.)

This accident occurred on a haulage incline which passed through an old quarry and the gradient of the road varied from 1 in 4 to 1 in 8. An enquiry

being from the two deceased. The tubs were of the side tipping type and were coupled together by means of lashing chains round the under-frames. One of these lashing chains had become unhooked and had thus allowed the two tubs to run amain. It was found that a tub was introduced. This accident also points to the necessity of keeping haulage roads clean and free from obstruction

My remarks in connection with another accident caused by a coupling becoming detached are also applicable to this accident.

Whatever the igniting medium this accident indicates the dangers attending the use of ordinary brattice cloth in underground workings, even in safety lamp mines. Serious accidents, due to the accidental ignition of ordinary brattice cloth can be readily envisaged. A non-inflammable brattice cloth has been used in some mines, but it appears that the protective qualities are lost after the cloth has been in use for a short time. It is hoped that a non-inflammable brattice cloth will soon be on the market which will retain its non-inflammable qualities. In some mines thin galvanised iron sheeting is used for "bratticing" purposes, thereby it is strongly recommended that non-bratticing" in order to eliminate the dangers attending the use of inflammable material.

Messrs The Lodna Colliery Company (1929) Limited's Lodna (Nos. 4 and 5 pits) coal mine.

(Two persons seriously injured.)

This accident occurred in a depillaring area in No. 15 seam, which is about 24 feet in thickness. Depillaring had been proceeding normally and the goaf breaking down to the surface. During the night previous to the morning of accident, when no persons were at work in the mine the sirdar found signs of "weight" in the depillaring area and at 6-30 a.m. on day of accident he reported this matter to the assistant manager and to the day shift sirdar. The day shift commenced at 6-30 a.m. and the assistant manager went underground with the intention of making an inspection before allowing work to be commenced. On visiting the depillaring section he found that the pillars adjoining the goaf indicated signs of "weighting", and as there were no persons there, he proceeded to the dip side of the depillaring area to make sure that miners had not gone into the working places to commence work. There were no persons present in the whole of the depillaring section, and accompanied by the sirdar, he was proceeding out of the depillaring area when there was a sudden collapse of the main roof in the goaf, which caused a heavy air-blast. The two injured persons, who were sitting down on a haulage road, were knocked over by the air-blast and received serious injuries. It is evident that the fall occurred very suddenly and the inspecting officer, who investigated this accident, was informed by the manager that it was most unusual for any air-blast to occur, because the local roof usually breaks down very regularly on the withdrawal of props, and this partially filled up the goaf.

Where air-blasts are likely to occur during depillaring operations in thick seams, "safety stations" in which all persons can be withdrawn whenever there are indications of "weight" in the depillaring area should be provided, so that work-persons can be safeguarded from the effects of air-blasts.

SECTION IV.—PROSECUTIONS AND AMENDMENTS TO THE ACT, REGULATIONS, RULES AND ORDERS MADE THEREUNDER.

(PROSECUTIONS.)

During the year judgments in the prosecutions were delivered as follows:—

The owners (eight), manager and an attendance clerk of a coal mine in the Raniganj coalfield were prosecuted; the owners and manager for the

systematic "robbing" and splitting of pillars and for employing persons in underground workings for more than nine hours a day and the attendance clerk for not maintaining a correct register of persons working underground. Three owners were acquitted and the charges against the other five owners were dropped. The attendance clerk was fined Rs. 35. The case against the manager is pending.

The owner of a coal mine in the Raniganj coalfield was prosecuted for failing to keep the inclines and shafts securely fenced. The case was withdrawn.

The owner, manager and two attendance clerks of a coal mine in the Raniganj coalfield were prosecuted; the owner for the systematic "robbing" and splitting of pillars; one attendance clerk for absenting himself from his duty without permission and without having been relieved by another person and both the attendance clerks for not maintaining a correct register of the number of persons working underground. The owner was fined Rs. 20, the manager Rs. 40, and the two attendance clerks Rs. 9 each.

The agent, manager and sirdar of a coal mine in the Jharia coalfield were prosecuted for allowing the dressing of the sides of pillars in contravention of an order issued under section 19(1A) of the Indian Mines Act. The agent was fined Rs. 35, the manager Rs. 25, and the sirdar Rs. 5.

The manager and the managing contractor of a coal mine in the Jharia coalfield were prosecuted for employing persons to work in a part of a quarry which was known to be dangerous and thereby caused the death of a miner by a fall of side. The manager was fined Rs. 50, and the managing contractor Rs. 500.

The two owners of a fire-clay mine in the Raniganj coalfield were prosecuted for failing to submit the notice of an accident. They were fined Rs. 25 each.

The owner of a coal mine in the Raniganj coalfield was prosecuted in that he failed (1) to maintain a register of work-persons, (2) to keep the sides of the quarries sloped, stepped or properly secured, and (3) to maintain a daily inspection book. He was fined Rs. 50.

The two owners of a coal mine in the Raniganj coalfield were prosecuted in that they failed to appoint a qualified manager. They were fined Rs. 50 each.

The owner of a coal mine in the Raniganj coalfield was prosecuted in that he failed to keep the two inclines, a quarry and a number of surface subsidences properly fenced. He was fined Rs. 100.

The overman and an attendance clerk of a coal mine in the Jharia coalfield were prosecuted, the overman for absenting himself from his duties although four miners were at work underground, and the attendance clerk for failing to keep the attendance register at the entrance to the mine and being absent from his duties although work was in progress underground. They were fined Rs. 10 each.

The owner of a coal mine in the Jharia coalfield was prosecuted in that he failed to keep the tops of the mine cuttings fenced. The case against him is pending.

Six managing directors and manager of a coal mine in the Raniganj coalfield were prosecuted in that (1) they allowed the development work to be continued towards . . . (2) they failed to provide adequate means . . . of a pit; and (3) they failed to keep a number . . . directors, five were fined Rs. 25 each and one was acquitted. The manager was fined Rs. 5.

The owner of a coal mine in the Jharia coalfield was prosecuted in that (1) he continued to work the mine without a qualified manager; (2) he continued to work the mine although the statutory inspections of the mine were not being made by a competent person having the prescribed qualifications and he failed to keep the sides of the quarry properly sloped, stepped or secured. He was fined Rs. 100.

The owner and manager of a fire-clay mine in the Raniganj coalfield were prosecuted for failing to keep the sides of the fire-clay excavation properly sloped, stepped or secured as a result of which one person lost his life and another was seriously injured by a fall of side from the excavation. The owner was fined Rs. 100, and the manager Rs. 150.

The managing agent of a coal mine in the Raniganj coalfield was prosecuted for failing . . . within the specified time.

The owner, agent and manager of a mica mine in the Hazaribagh district were prosecuted (1) for employing underground four females, two of whom were children; (2) for failing to maintain a register showing the persons employed in the mine; and (3) for failing to keep the roof and sides of the underground workings properly secured. The owner was fined Rs. 10, the agent Rs. 50, and the manager Rs. 75.

The owner and manager of a mica mine in the Bhagalpur district were prosecuted (1) for employing two females underground; (2) for employing underground four boys of less than 15 years of age; (3) for failing to keep the shafts fenced on the surface; and (4) for failing to maintain an accurate plan and section of the mine. The owner was fined Rs. 20, and the manager Rs. 50.

The two owners of a coal mine in the Raniganj coalfield were prosecuted for failing (1) to keep a quarry securely fenced; and (2) to keep the dangerous and insecure workings in the quarry securely fenced. They were fined Rs. 40 each.

The owner of a coal mine in the Jharia coalfield was prosecuted in that (1) he continued to work the mine without a qualified manager; (2) he failed . . . failed to keep an up-to-date plan of the mine; (4) he failed . . . to submit a notice and plan of the proposed workings, which had been extended underneath dwellings; and (6) he submitted reports to the Chief Inspector of Mines in India containing false statements to the effect that the mine was closed, although work was being carried on in the mine. He was fined Rs. 150.

The owner of a coal mine in the Jharia coalfield was prosecuted (1) for failing to submit notice of re-opening of the colliery; and (2) for failing to

submit a monthly return of coal raisings and coal despatches for the month of February 1939. He was fined Rs. 100.

The owner of a coal mine in the Raniganj coalfield was prosecuted for failing to keep all the discontinued mines fenced with fences of a permanent character. He was fined Rs. 10

The owners (three) of a coal mine in the Jharia coalfield were prosecuted for failing to keep an incline and a quarry fenced with structures of a permanent character. They were fined Rs. 20 each

The owners (three) of a coal mine in the Jharia coalfield were prosecuted for failing to submit notice of closing to the Chief Inspector of Mines in India. As the notice of closing was submitted afterwards the case against them was withdrawn.

The overman and an attendance clerk of a coal mine in the Jharia coalfield were prosecuted, the overman for leaving the mine although persons remained at work in the mine and he was not relieved by another competent person, and the attendance clerk for showing all persons as having returned to the surface when miners and trammers were actually still at work underground. The overman was fined Rs. 15, and the attendance clerk Rs. 25

The owner of a mica mine in the Hazaribagh district was prosecuted (1) for allowing a child to be employed in the mine, (2) for continuing to work the mine without a manager with the prescribed qualifications, (3) for failing to maintain a register of work-persons on Schedule "A", (4) for failing to keep the requisite ambulance appliances and medicines at the mine, and (5) for failing to keep the sides of the excavations in which work was in progress adequately sloped back. He was fined Rs. 100.

The owner and an overman of a coal mine in the Jharia coalfield were prosecuted for the mine being split and "robbed", and the owner for not keeping the incline securely fenced on the surface and underground plans of the mine. The case is pending.

The owner of a coal mine in the Jharia coalfield was prosecuted (1) for allowing pillar "robbing", (2) for failing to maintain the registers in accordance with Schedule "A", (3) for failing to provide at the mine the requisite ambulance appliances and medicines; and (4) for failing to keep incline cuttings adequately fenced. He was fined Rs. 15

The owner of a coal mine in the Jharia coalfield was prosecuted (1) for failing to provide suitable gates or other rigid fences on cages used for lowering and raising persons in a shaft; and (2) for failing to keep the top of the shaft properly fenced. He was fined Rs. 25.

Three attendance clerks, one banksman, one winding engine driver, one onsetter, one lamp-room in charge and one overman of a coal mine in the Jharia coalfield were prosecuted in that two of the attendance clerks,

banksman, winding engine driver, onsetter, lamp-room in charge and the overman, who were authorised in writing by the manager for specific duties, were found asleep whilst on duty; furthermore two of the attendance clerks failed to keep a correct record of the persons returning from underground. Two of the attendance clerks were fined Rs. 15 each, and the other Rs. 10; the banksman Rs. 8, winding engine driver Rs. 10, onsetter Rs. 8, lamp-room in charge Rs. 10 and the overman Rs. 10.

The attendance clerk and a sirdar of a coal mine in a Jharia coalfield were prosecuted in that they being authorised in writing by the manager for specific duties were found asleep whilst on duty. The case against the attendance clerk was dropped as he absconded and the sirdar was fined Rs. 10.

Two miners of a coal mine in the Jharia coalfield were prosecuted for behaving in a violent manner while employed underground and causing serious injuries to an overman. The case is pending.

The owner and a manager of a coal mine in the Jharia coalfield were prosecuted for failing to keep the inclines and quarries properly fenced, and failing to keep the requisite ambulance appliances and medicines at the mine. The owner was fined Rs. 30, and the manager Rs. 25.

The owner of a coal mine in the Raniganj coalfield was prosecuted for continuing to work the mine without a manager with the prescribed qualifications. He was fined Rs. 15.

The District Magistrate, Allahabad, instituted a case against the agent and manager of a stone mine in his district for their failure to submit the notice of a serious accident to the Chief Inspector of Mines in India. The accused were acquitted in view of a technical defect in the prosecution order which was signed by the Deputy Magistrate instead of by the District Magistrate.

The manager and a fitter of a coal mine in the Raniganj coalfield were prosecuted (1) for failing to see that the winding rope was maintained in safe working order; and (2) for failing to see that the winding rope was maintained in safe working order. The manager was fined Rs. 500 and the fitter Rs. 200.

The agent and a manager of a coal mine in the Raniganj coalfield were prosecuted. The Agent (1) for permitting pillars to be "robbed" and allowing galleries to be driven of excessive width; (2) for failing to keep clear the drain of a pit sump so that a proper examination of the guide rope clamps could be made; and (3) for failing to ensure that an adequate amount of ventilation was constantly produced in the rise workings of the mine. The Agent was fined Rs. 100 and the manager Rs. 50.

The owner and manager of a mica mine in Monghyr district were prosecuted (1) for failing to provide proper ladderways in the pits; (2) for failing to keep the sides of the shafts secured; and (3) for failing to keep the pits securely fenced on the surface. They were fined Rs. 15 each.

The owner and manager of a mica mine in the Hazaribagh district were prosecuted (1) for employing eight persons underground, who had not completed their seventeenth year and who did not possess certificates of fitness as granted by a qualified medical practitioner; (2) for failing to maintain a register of all persons employed in the mine in the prescribed form; and (3) for failing to keep the sides of the excavation securely stepped or sloped. They were fined Rs. 30 each.

The agent and manager of a mica mine in the Hazaribagh district were prosecuted (1) for employing underground two persons who had not completed their seventeenth year and who did not possess a certificate of fitness granted by a qualified medical practitioner; (2) for failing to provide proper ladderways with platforms in the shafts, and (3) for failing to keep the requisite ambulance appliances at the mine. They were fined Rs. 30 each.

The owner, agent and manager of a mica mine in the Monghyr district were prosecuted (1) for employing two children underground, (2) for failing to maintain a proper plan and section of the mine, (3) for failing to maintain the ladders in use underground in proper repair or to fasten them properly at the top and at the bottom, and (4) for failing to provide the requisite ambulance appliances at the mine. The owner and agent were fined Rs. 7-8 each and the manager Rs. 5.

Four prosecutions were instituted against mine-owners of four coal mines in the Jharia coalfield for including fictitious figures for closing stocks on the 31st December 1938, in the annual return submitted by them in January 1939. One of the owners was fined Rs. 300, two Rs. 50 each, one Rs. 25; one was acquitted, one died and the charges against three others were dropped as they were untraced.

Nine prosecutions were instituted against eleven owners for failing to submit annual returns to the Chief Inspector of Mines in India. One of the owners was fined Rs. 30; one Rs. 35; one Rs. 20; two Rs. 25 each, one Rs. 5; one was acquitted, charges against one were dropped and the case against three was withdrawn.

Three prosecutions were instituted against three applicants for sirdars' their practical mining experience Rs. 100, and the case against

The manager of a mica mine in the Hazaribagh district was prosecuted in that (1) he falsified the records required to be maintained under Metalliferous Mines Regulation 72, and (2) he failed to register in a book kept at the mine the names of all persons who were permitted by him to carry and use explosives. He was acquitted.

The owner and contractor of a mica mine in the Hazaribagh district were prosecuted in that (1) an inspection was not being made by a competent person, and a report of the result of such inspection was not being maintained in a book kept at the mine for the purpose; (2) the sides of many of the pits in which work was in progress were not stepped, sloped or otherwise secured; (3) none of the deep pits was fenced; (4) several discontinued open excavations were not fenced; and (5) the specified ambulance appliances were not kept at the mine. They were fined Rs. 40 each.

The owner of a coal mine in the Jharia coalfield was prosecuted in that (1) he continued to work the mine without a qualified manager; and (2) he continued to work the mine although inspections in accordance with Coal Mines Regulation 70(2) were not made by a competent person having qualifications prescribed by Coal Mines Regulation 71. He was fined Rs. 150.

The owner of a coal mine in the Jharia coalfield was prosecuted for failing to submit a plan of the discontinued workings of the mine. The case is pending.

The owners (four) of a coal mine in Jainty coalfield were prosecuted in that they continued to work the mine without a qualified manager. The case is pending.

Information was received of the following prosecutions instituted by mine officials against subordinate staff.

A sirdar of a coal mine in the Pench Valley coalfield was prosecuted for leaving a working place, knowing it to be dangerous and without taking due precautions. He was fined Rs. 60.

A fitter and a trammer of a coal mine in the Pench Valley coalfield were prosecuted. The fitter for failing to comply with the lawful orders issued by the manager in that he passed a danger signal, and the trammer for riding on a loaded set of tubs without authority. The former was fined Rs. 5 and the latter Rs. 20.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for failing to examine a place of accident after firing a shot. He was sentenced to nine months' rigorous imprisonment.

A timberman of a coal mine in the Pench Valley coalfield was prosecuted for attaching an empty set of tubs with flexible wire rope to a timber trolley which became detached while the set was being lowered. He was sentenced to three months' rigorous imprisonment.

A sirdar of a coal mine in the Assam coalfield charged three shots in an "opening". The coal from two shots in the roof buried the third shot but he left the place unfenced without attempting to remove the coal from the third shot hole. He was prosecuted and fined Rs. 25.

A chaprasi of a coal mine in the Raniganj coalfield was prosecuted for allowing four stone-cutters to enter the cage for descending the shaft in the absence of the banksman. He was acquitted.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for not observing the precautions as laid down in Coal Mines Regulations 109 and 110. He was sentenced to nine months' rigorous imprisonment.

A miner of a coal mine in the Ramganj coalfield was prosecuted for riding on tubs without authority. He was fined Rs. 20.

Two prosecutions were instituted against four miners for sleeping whilst on duty. Three of them were acquitted and one was fined Rs. 25.

Three prosecutions were instituted against four miners for behaving in a violent manner in the mine. One of the accused was fined Rs. 3, one Rs. 15; and the other two Rs. 30 each.

Three shot-firers of a coal mine in the Pench Valley coalfield were prosecuted for failing to take the precautions as laid down in Coal Mines Regulations 109, 110 and 117. One was fined Rs. 30, one Rs. 20; and the other Rs. 60.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for having in his possession more than the permitted amount of explosives and for sleeping whilst on duty. He was acquitted.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for failing to fence the entrance to a place where a shot had misfired. He was fined Rs. 10.

A Sirdar of a coal mine in the Pench Valley coalfield was prosecuted for failing to make the statutory inspection of the mine and failing to record the result of such inspection in the report book. He was fined Rs. 15.

An "in-charge" of machinery in a coal mine in the Pench Valley coalfield was prosecuted for failing to report the defects of machinery to a responsible official and for interfering with the defective parts of the same. He was fined Rs. 45.

AMENDMENTS TO THE INDIAN MINES ACT AND TO THE REGULATIONS, RULES AND BYE-LAWS MADE UNDER THE ACT.

In Notification No. M-1055, dated the 16th January 1939, the Central Government directed that certain amendments shall be made in the rules made under Section 30 published with the notification of the Government of Madras, in the Development Department, No. 6, dated the 26th November 1924, the same having been previously published as required by sub-section (1) of Section 31 of the Act. The notification is reproduced in Appendix IV, Statement No. 3.

In Notification No. M-955, dated the 9th February 1939, the Central Government framed Coal Mines Rescue Rules. The notification is reproduced in Appendix, IV, Statement No. 4.

In Notification No. M-1051, dated the 1st March 1939, the Central Government directed that further amendments shall be made in the notification of the Government of India, in the Department of Labour, No. M-1051, dated the 20th January 1938. The notification is reproduced in Appendix IV, Statement No. 5.

In Notifications Nos. M-1055(1) and M-1055(2), dated the 9th March 1939, the Central Government directed that certain amendments shall be made in the notifications of the Government of India, in the Department of Labour, No. M-1055(1) and No. M-1055(2), dated the 24th August 1938, relating to the constitution of a Mining Board for coal mines and mines other than coal mines in the province of Bihar. These notifications are reproduced in Appendix IV, Statements Nos. 6 & 7.

In Notification No. M-1055, dated the 30th March 1939, the Central Government nominated Mr. E. R. J. R. Cousins, C.I.E., I.C.S., Commissioner of the Chota Nagpur Division, to act as Chairman of the Mining Boards for coal mines and for mines other than coal mines constituted for the province of Bihar, vice Mr. A. P. Middleton, I.C.S.

In Notification No. M-955, dated the 20th April 1939, the Central Government in exercise of the powers conferred by Rule 4 of the Coal Mines Rescue Rules, constituted the Rescue Stations Committee consisting of certain members mentioned in the aforesaid notification. The notification is reproduced in Appendix IV, Statement No. 8.

In Notification No. M-1055, dated the 17th May 1939, the Central Government nominated Mr. C. S. Jha, I.C.S., Additional Deputy Commissioner, Dhanbad, as a member of the Mining Board for coal mines in the province of Bihar, vice Rai Bahadur Nagendra Nath Roy.

In Notification No. M-955(2), dated the 5th July 1939, the Central Government directed that the Supplementary Coal Mines (Temporary) Regulations, 1937, shall be cancelled.

In Notification No. M-955(1), dated the 5th July 1939, the Central Government directed that certain further amendments shall be made in the Indian Coal Mines Regulations, 1926. The notification is reproduced in Appendix IV, Statement No. 9.

In Notification No. M-955, dated the 20th July 1939, the Central Government fixed $7\frac{1}{2}$ as the percentage which each Railway Administration shall be entitled to deduct, towards the cost of collection, from the total amount of excise duty collected by it under Rule 22 of the Coal Mines Rescue Rules, 1939.

In Notification No. M-955, dated the 20th July 1939, the Central Government directed that certain further amendments shall be made in the Indian

Coal Mines Regulations, 1926 The notification is reproduced in Appendix IV, Statement No. 10.

In Notification No. M-955(1), dated the 17th October 1939, the Central Government fixed the date from which the excise duties shall be levied and collected and also fixed the rate at which such duties shall be levied and collected on coal and soft and hard coles. The notification is reproduced in Appendix IV, Statement No. 11.

By the end of the year bye laws under Section 32 of the Act had been established at six hundred and twenty-seven coal mines and twenty-two mines other than coal. Amended bye-laws have been established at four hundred and fifteen coal mines.

Bye-laws for the treatment of coal-dust had also been established at forty-eight coal mines.

During the year one circular letter was issued to the managers of coal mines It is reproduced in Appendix IV, Statement No 12.

The following notifications relating to the Coal Mines Safety (Stowing) Act were issued during the year :—

In Notification No. M-955, dated the 22nd May 1939, the Central Government fixed the 27th May 1939 as the date on which the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), shall come into force

In Notification No M-955, dated the 10th August 1939, the Central Government in exercise of the powers conferred by Section 3 of the Coal Mines Safety (Stowing) Act (XIX of 1939) constituted the Coal Mines Stowing Board consisting of certain members mentioned in the aforesaid notification. The notification is reproduced in Appendix IV, Statement No 13

In Notification No. M-955(2), dated the 17th October 1939, the Central Government framed Coal Mines Safety (Stowing) Rules The notification is reproduced in Appendix IV, Statement No 14

SECTION V.—GENERAL REMARKS.

PROTECTIVE EQUIPMENT

During the year several thousands of "safety hats" made of bamboo were worn by miners at a number of mines in the Jharia and Raniganj coalfields In the Assam mines, owned by the Assam Railways and Trading Company, Limited, "safety helmets" made of compressed fibre material and imported from Great Britain were used Over 200 of these helmets were worn by miners employed in "openings" or "chambers" where small pieces of roof or side coal may fall unexpectedly on the miners' heads

Bamboo hats were first introduced at Sendra colliery. The manager employed a contractor to make these hats and when large numbers were produced the cost worked out at only two annas each.

The efficacy of this head protection is illustrated by the following occurrence. An assistant reported to the manager of the mine as follows:—“at about 3 p m on 1st September a piece of coal fell from a height of 15 feet on to the bamboo “safety hat” worn by timber coolie, Bhureswar Singh, while holding with other timber coolies, a prop for erection in the 5th rise of No. 6 west drift (13 seam). The piece of coal pierced through the hat and caused a slight cut on his head. Had his head been bare, the injury might have been very serious or fatal as is evident from the nature of the cut in the hat.

Photograph 1 illustrates “A group of miners wearing bamboo hats ready to proceed underground”, while Photograph 2 illustrates the damaged hat referred to above.

Another case will further indicate the additional safety afforded to miners by wearing these hats. A manager reporting another occurrence to his Chief Mining Engineer stated:—“This is to inform you that a miner of No 1 pit, Thakur Singh, while working in 14 seam depillaring area on 21st February, was struck on the head by a piece of coal weighing about 2 lbs. falling from a height of about 12 feet. Fortunately his head was not hurt as he was wearing one of the bamboo hats already issued to him. The piece of coal after striking his head struck his shoulder which was scratched and bruised, then the coal fell on to his left heel”.

In view of the benefits derived by using such protection the extended use of these hats or of any other type of hat which will protect the miner and reduce the number of accidents due to head injuries is strongly recommended.

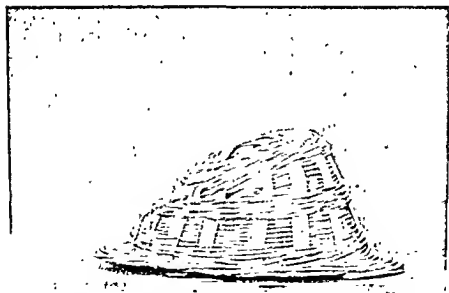
AIR-BLASTS IN UNDERGROUND WORKINGS.

Air-blasts caused by the collapse of large areas of roof in goaves are common in working thick seams, except in those mines where the goaves are stowed. It is in “panel” districts, where there are few openings into the area where air-blasts are likely to prove most dangerous unless precautions are taken to keep the workers clear of the force of the blast, by withdrawing them to “safety stations” when “weighting” is detected, as referred to in connection with an accident due to an air-blast, of which full details are given in Section III of this report.

I am in
Indian Co
air pressur
Figures 1 a
gauge situated underground in Bararee colliery, at a point near which depillaring operations are proceeding.



A group of miners wearing bamboo hats ready to proceed underground



A bamboo hat worn by a miner and damaged by a fall of .

CHARTS OF SELF REGISTERING WATER GAUGE

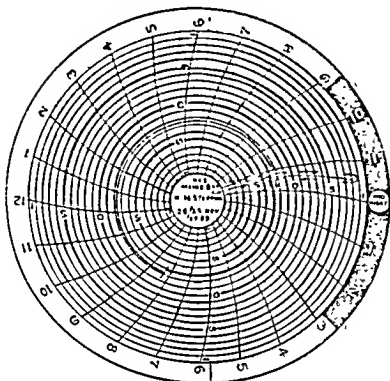


FIG. 1.

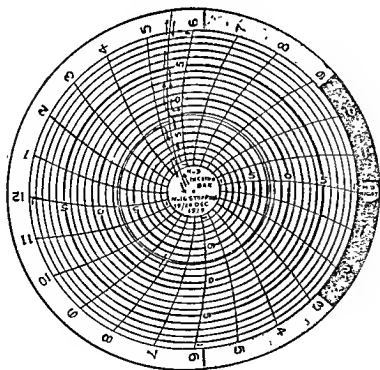


FIG. 2.

The water gauge is in use on a fire stopping, giving continuous readings of the water gauge existing between the inside and outside atmospheres of the stopping. The charts show the swing due to air pressures set up by a big goaf fall during depillaring operations in No. 15 seam (27 feet in thickness) at a distance of 700 feet away from the instrument. The sequence of pressures shown on the chart, dated 28th/29th November, were as follows :—

+ 0.9 inch water gauge (positive).

— 1.1 inch water gauge (back lash).

From the "table of equivalents" as provided by the makers of the instrument, relating to velocity and air pressure, the following velocities for the above-mentioned air pressures are given :—

0.9 inch water gauge just under 4,000 ft. per minute (positive).

1.1 inch water gauge just over 4,000 ft. per minute (back lash).

In this instance the area collapsed was roughly 11,000 square feet, but it was supported in part, and the collapse did not break through to the surface. Three weeks later, i.e., on the 19th December, after some little extension of the depillaring operations, the area collapsed to surface. The area affected in the workings was 14,000 square feet with a broken surface area of 2,800 feet. The cover was 110 feet. The chart dated 19th/20th December shows the effect of the air-blast on the recording water gauge. It will be observed on that chart that both ends of the pressure swing are incomplete. That towards the centre of the chart was stopped by the centre pin of the instrument and that on the outside having passed over the edge of the paper. The limits of the above show that the first pressure was something unknown over 1.6 inch water gauge, and the "back-lash" pressure of something over 1.7 inches. These pressures represent air velocities—according to the "table of equivalents" provided by the makers—of about 5,000 feet per minute.

It will be observed that unless precautions are taken by leaving "vent holes" in "panel" districts for the release of pressure and places for the safe retreat of workers are provided these air-blasts are likely to produce disastrous effects.

UNDERGROUND FIRES.

In my Annual Reports for the years 1932, 1933, 1935, 1937 and 1938 reference was made to extensive fires at the Kusunda group of mines and at the Khas Jharia group of mines and the precautionary measures being adopted to prevent the spread of the fires. At the Kari Jore the protective works have been continued throughout the year under the supervision of the management of the Bhuggutdih colliery, owned by the Bengal Nagpur Coal Company, Limited, and it is considered that the efforts of the several large companies, who undertook these protective works at great cost, are meeting with success, as the old workings in No. 11-12 seam under the jore have now been stabilised. There is no doubt that if these protective works had not been energetically pursued, the Kari Jore would have collapsed, resulting in the spread of fire and the flooding of adjoining collieries. The protective works are now chiefly concerned with preventing the extension of the fire in No. 13 seam workings.

At the Khas Jharia group of mines protective works, consisting of "blanketing" and the flushing of sand through boreholes in the vicinity of the Jharia-Pathardih main line of the East Indian Railway, was continued throughout the year under the supervision of the Mining Adviser to the East Indian Railway.

HEALTH AND SANITATION.

The Asansol Mines Board of Health was reconstituted in March 1939 under Government of Bengal Notification No 297-P. H., dated the 7th March 1939. The Divisional Medical Officer, East Indian Railway, replaced the Civil Surgeon, Burdwan, as *ex-officio* member, and a representative of the National Association of Colliery Managers in place of the Indian Mine Managers' Association was nominated by the Government. The Board held two special and twelve ordinary meetings during the year. Both the birth-rate and the death-rate were at about the same level as in the previous year. The infant mortality rate fell from 137.2 per 1,000 in 1938, to 129.8 in 1939. The death-rate among the resident colliery population was considerably below that of the general population throughout the year. The monthly returns from collieries showed a fluctuation in the mortality rate between 19.5 and 8.2 per 1,000, while the death-rate of the Mining Settlement as a whole ranged between 21.0 and 16.4 per 1,000. The monthly variation in the sickness rate among the mining population ranged between 14.7 per cent. in July and 8.0 per cent. in February—the first half of the year being comparatively healthy as compared to the second half, which is usually associated with malaria, enteric and respiratory diseases. Epidemic cholera, associated with agglutinable vibrio, made its appearance in April, reached its maximum intensity in August, and declined subsequently. Out of 781 cases, 275 were reported from collieries, 472 from villages and 34 from the municipal towns. The incidence rate was 4.6 per 1,000 in collieries and 1.7 per 1,000 in rural areas. Intensive inoculation was carried out both in anticipation of and during the prevalence of cholera. 72,188 persons were inoculated, of whom 30,211 were of the colliery population. Measures under the Cholera Regulations were taken to prevent the spread of infection. Small-Pox has been kept under control by keeping the population protected by mass re-vaccination on a large scale every year during the last few years. The total number of persons vaccinated in 1939 was 93,479, which represents about one-fourth of the population. 109 cases and 14 deaths from Small-Pox were reported during the year. Among the provisions of the Small-Pox Regulations enforced, was compulsory re-vaccination in any area notified as an "infected area". The number of Maternity and Infant Welfare Centres was increased from nine to ten with an additional sub-centre situated in an important colliery. Each centre was in charge of a Health Visitor and served the needs of the neighbouring group of collieries and villages. 287 infants and 185 toddlers attended the morning clinics at these centres. 2,099 cases of confinements were attended by trained dais and 195 by the Health Visitors. 1,560 expectant mothers were under ante-natal supervision and 2,403 cases were kept under post-natal supervision by the Health Visitors. 2,095 infants and 1,153 toddlers were visited in their homes. Out of 167 dais trained during the year 104 appeared in the examination conducted by a Board of Examiners and 84 received certificates.

The three Welfare Centres opened by Messrs. McNeil & Company for a group of collieries continued to do useful work throughout the year.

Fourteen Leprosy clinics were maintained under the supervision of 5 Leprosy Officers assisted by 14 trained assistants, who carried out intensive survey, propaganda and home-visiting of lepers in their houses. A detailed survey revealed an infection rate of 1.5 per cent. in the general population. A special investigation among the 5,400 known lepers showed a definite history of contact with relations and neighbours in 2,582 cases—the infection being traceable to parents in 527 cases, to brothers and sisters in 391 cases, to other relatives in 592 cases, to conjugal infection in 94 cases and to association with neighbours in 1,008 cases. 2,895 cases were registered for treatment, of whom 246 either became symptom-free or were discharged cured. The Asansol Leper Settlement, which is under construction at an estimated cost of Rs 40,000, provides for a hospital with 18 beds and groups of cottages and huts for 50 leper beggars and highly infectious cases of leprosy. The Annual Leper-Day was responsible for a total collection of Rs 32,500, of which over Rs 12,500 represented the day's collection by sale of flags and the sum of Rs. 20,000 was received as a special donation for the Leper Settlement.

Anti-malaria measures were carried out in 10 malarious areas and included abolition and treatment of breeding places with larvicides along with field survey and laboratory investigation. Rural areas were encouraged to undertake suitable measures by rendering assistance and advice. A free distribution of quinine was also given during epidemic seasons.

The Annual Health and Baby Week was arranged by the Welfare Society in co-ordination with the Board of Health. In addition to the Health Exhibition and Baby Show, training and competitions were arranged in various centres in first-aid, home-nursing, mother-craft and health study. The Ambulance competition met with increasing success and helped to stimulate training and practice in first-aid and ambulance service among miners and non-miners and also among school boys.

During the year the Jharia Mines Board of Health held twelve ordinary,

There were 216 cases of suspected cholera with 90 deaths, as compared with 86 cases with 30 deaths in the previous year. The number of deaths on collieries from cholera was 20, as compared with 5 in the previous year. The total number of anti-cholera inoculations performed was 7,992. During the year, there were 1,836 cases of suspected Small-Pox with 203 deaths, as compared with 378 cases with 19 deaths in the previous year. Four hundred and forty-two samples of food were analysed in the Board's laboratory and prosecutions were ordered in all cases of adulteration. The five years' housing programme, enforced by the Board last year, continued during the year. Subjects chosen for propaganda were leprosy, maternity and child welfare, general hygiene, sanitation, dietetics, vitamins and temperance.

The Dhanbad and District Leprosy Relief Fund continued to be in sole charge of all leprosy relief work in the Mining Settlement.

The Jharia Water Board continued to function throughout the year. The total quantity of water supplied during the year under review was about 470 million gallons as per details given below :—

	Gallons
1. Collieries	387,265,000
2. Non-colliery premises (domestic and non-domestic supply)	33,915,000
3. Bazaris of Jharia, Katra and Kulti and other places supplied through standpipes	48,910,000
Total	470,120,000

INSPECTIONS MADE BY MEDICAL OFFICERS AS *Ex-Officio* INSPECTORS OF MINES.

During the year many reports were received from provincial and district Medical Officers of Health concerning health and sanitation. All the reports were dealt with and most of the recommendations were carried out.

STATISTICS OF RAINFALL.

Statistics of rainfall in the eastern coalfields have been recorded as follows :—

	Rainfall in inches,	
	1939.	1938
Jharia Coalfield—		
Jeamdoh	52.55	51.24
Topchanchi	63.88	36.34
Raniganj Coalfield—		
Asansol	56.80	47.87
Dabergarh	66.35	53.59
Girdih Coalfield—		
Girdih	64.40	52.25

During the year the rainfall in the catchment area at Topchanchi was 63.88, as against 36.34 inches in the previous year. The main problem during the first half of the year was in meeting the situation arising out of a shortage of water in Topchanchi reservoir owing to an exceptionally low and irregular rainfall during the previous year. Various efforts were successfully made to curtail the consumption as far as practicable to the minimum requirements of consumers by means of restricting the hours of supply and by taking steps to prevent leakage and wastage of water. Besides, subsidiary sources of supply were considered necessary in order to meet the increased demands of water during the summer months of the year. A pumping scheme to which reference was made in my last Annual Report to augment the supply with filtered and chlorinated pit water was introduced at Kustore colliery and it was put into operation by the end of January.

and continued up to the 26th September. The lake water level started rising from 22nd June and twenty-four hours' supply was restored by the end of August. The lake was filled up to the overflow level on 12th September and the maximum overflow of the year was reached at 7 a.m. on the 23rd September.

AMBULANCE WORK.

Four meetings of the Executive Committee of the Dhanbad-Jharia Coalfield Centre of the St. John Ambulance Association were held during the year

Lectures in first-aid were given at eighteen centres in the Jharia coalfield and five centres in the Dhanbad civil area. In addition to these centres arrangements were made for lectures in first-aid for mine workers at Khalari, Ranchi district, at Shahabad in the province of Bihar, at Talcher and Rampur collieries in the province of Orissa, and Shankargarh in the United Provinces. During the year, 396 candidates appeared for examination, of whom 316 were successful in obtaining first-aid senior certificates through this centre. The growth and importance of this centre is demonstrated by the gradual increase in the number of persons examined and the number of certificates granted. The number of persons examined and the number successful were as follows :—

Year.	No. examined.	No. successful.
1935	169	117
1936	256	219
1937	390	292
1938	313	253
1939	396	316

A circular letter was sent to all collieries in the Jharia coalfield calling on owners, agents or managers to organise "refresher" lectures in first-aid for their employees who have been in possession of first-aid certificates for a number of years. Although definite figures cannot be given of the number of centres at which such lectures have been given and the number of persons who attended the lectures, enquiries made by Inspectors of Mines first-aid certificate to record that all a course of lectures in first-aid and the senior girls of the Dhanbad Girls' School are receiving lectures in first-aid, home-nursing, etc.

Another very important extension of the activities of the centre has been the formation of Ambulance Divisions under the St. John Ambulance Brigade in Dhanbad and the Jharia coalfield. In the Dhanbad civil area one Ambulance Division and one Nursing Division have been organised by Dr. J. N. Sen, Secretary, and in the Jharia coalfield Ambulance Divisions have

been organised at (a) Bararee colliery, (b) Lodna colliery, (c) Kustore colliery, (d) Jamadaha colliery, (e) Pure Jharia colliery, (f) Loyabad colliery, and (g) Katras and Malkera collieries. These Divisions have been so arranged as to serve definite areas in the event of major mine accidents and to give assistance in case of Air Raids. In most cases members of these Divisions have been recruited at several collieries in the vicinity of the Divisional headquarters. Members of these Divisions have already completed a course of lectures in first-aid and special classes in stretcher drills will be arranged as soon as the services of a Havildar can be obtained on loan from No. 9 Brigade Headquarters. It is proposed to organise competitions for the Ambulance Divisions and for teams from various collieries and schools early in 1940.

The administration and organisation of the centres has been undertaken principally by the Chairman, Mr. N. Barraclough, Inspector of Mines, who has been ably assisted by Dr. J. N. Sen, Joint Secretary.

In the Raniganj coalfield classes in first-aid to the injured were held at eleven centres. Three hundred and twelve candidates attended these classes and 234 were awarded certificates, as compared with 167 and 118, respectively, in the previous year. A women's class was held at Disheigarh centre where ten students attended and passed.

The St. John Ambulance Shield, which is competed for among teams from the various collieries in the Raniganj coalfield, was won by Seetalpur colliery team (Messrs. Bengal Coal Company, Limited), the runners up being Sodepur Nos. 9 and 10 pits team (Messrs. Bengal Coal Company, Limited). Medals were presented to the individual members of the above teams.

The Lang-Cunningham Memorial Shield was won by Disheigarh colliery team (Messrs. Equitable Coal Company, Limited). The Lang Memorial Shield was won by Victoria West colliery team (Messrs. New Beerbhumi Coal Company, Limited), the runners-up being Seebpur Workshop team (Messrs. Bengal Coal Company, Limited). All these competitions were held at Asansol during the Health Exhibition week, and created much general interest.

I wish to express my appreciation of the valuable work done by lecturers and examiners in the two major coalfields and other mining districts.

MINING BOARDS IN BENGAL, BIHAR AND THE CENTRAL PROVINCES AND BERAR.

The Bengal Mining Board did not meet during the year and the only subject dealt with was done by correspondence and concerned certain amendments to Indian Coal and Metalliferous Mines Regulations, 1926. The non-official members of the Board were Messrs. F. W. Manley, A. L. Ojha and Rai Sahib Upendra Nath Mondal.

The Bihar Mining Board for coal mines held one meeting during the year and the only subject discussed at the meeting and also dealt with by correspondence was certain amendments to the Indian Coal Mines Regulations, 1926. The non-official members of the Board were Messrs J. E. Pbelps, A. L. Ojha, Shiva Kali Bose and S. B. Sen.

The Bihar Mining Board for mines other than coal mines did not meet during the year and the only subject dealt with was done by correspondence and concerned certain amendments to the Indian Metalliferous Mines Regulations, 1926. The non-official members of the Board were Messrs. H. W. T. Martin, J. E. Phelps and Rao Bahadur D. D. Thacker.

The Central Provinces and Berar Mining Board held no meetings during the year. The subjects dealt with by correspondence were:—(a) Proposed amendments to Indian Coal Mines Regulations, 1926; (b) proposed amendments to Indian Metalliferous Mines Regulations, 1926; and (c) draft Coal Mines Safety (Stowing) Rules. The non-official members of the Board were Messrs. L. H. Bartlett, O.B.E., G. Llewelyn, Samsher Bahadur Verma, Kunjbehari Lal Tulsiram Mehta and D. M. Nargolwala. Mr. D. M. Nargolwala was replaced by Mr. Gulab Chand Choudhury on 23rd August 1939.

BOARD OF EXAMINERS.

Five meetings of the Board of Examiners were held during the year. The non-official members of the Board were Messrs. N. N. Sarkar, J. E. Phelps and L. A. Jacobs. The first named member was replaced by Mr. H. K. Nag and the last named member was replaced by Mr. G. Castles. The local examiners appointed were Messrs. J. Thomson, W. B. Penman for coal mine managers' first class certificates; Messrs. B. Panda and D. Heron for coal mine managers' second class certificates, and Mr. J. Mackay for the examination for coal mine surveyors' certificates. Mr. N. G. Chatterjee, Inspector of Mines, was also an examiner and acted as Secretary for the coal mine managers' first and second class and coal mine surveyors' examinations.

Nine first class certificates of competency to manage coal mines and one surveyor's certificate were granted in lieu of British certificates of the same class. At the examinations for coal mine managers' certificates held at Dhanbad in February, 115 candidates sat for first class certificates and 114 for second class certificates. Seven certificates of the first class and twenty-four of the second class were granted. At the examination for coal mine surveyors' certificates of competency held in November, 57 candidates attended the examination. Twenty-five of them were successful.

Nine hundred and two persons were examined for coal mine sirdars' certificates of competency and 661 certificates were granted. Out of 750 holders of sirdars' certificates examined in gas testing, 502 were successful and their certificates were duly endorsed to that effect. 458 holders of sirdars' certificates appeared for re-examination in eye-sight and hearing. 439 were successful and their certificates were duly endorsed. Under Coal Mines Regulation 49, the certificates of nine sirdars were suspended, each for a period of three months. During the year 17 duplicate sirdars' certificates and 55 duplicate discs were issued.

As Regulation 108 (3) of the Indian Coal Mines Regulations provides that ~~with effect from 1st January 1939~~ appointed as a shot-firer ~~the examination for~~ ~~the examination for~~ July 1939. During the year under review 351 candidates were examined and 289 of them were successful.

of a whole-time lecturer and a whole-time assistant lecturer, one temporary part-time lecturer and one temporary part-time assistant lecturer were appointed for each of the two centres—Sitarampur and Paraseole. The total number of students attending the classes at these two centres was 100. Similar classes continued to be held under the auspices of the Government of Bihar at Jharia and Sijua in the Jharia coalfield. The total number of students attending these classes at the two centres was 148, as against 105 in the previous year. Fourteen of the third year students appeared at the final examinations and four were successful. In both the coalfields, courses of lectures were delivered in the modern Indian language to overmen and airdars, in the Raniganj coalfield in Bengali, and in the Jharia coalfield in Hindi. There were eight centres in the Raniganj coalfield and 172 students were enrolled for this course. In the Jharia coalfield there were six centres with a total enrolment of 446. Classes in gas testing were also held as usual.

Surveying could not be held in the Jharia coalfield because there was no permanent mining lecturer.

SCIENTIFIC AND TECHNICAL ASSOCIATIONS.

(a) Mining, Geological and Metallurgical Institute of India.

The total number of members, including subscribers, at the end of the financial year of the Institute, i.e., on the 31st October 1939, was 402. Admission fees, which had been remitted or reduced for several years in the past, were re-imposed during the year. In addition to the annual meeting, seven ordinary general meetings were held for the reading and discussion of papers. Visits were also paid to the offices and printing works of the Statesman Limited, Calcutta; to the plant and mining operations at the Noamundi, Singhbhum district; to inspect the sand stowing operations at Messrs. F. W. Heilgers & Company's Bhulanbararee colliery in the Jharia coalfield and Messrs. The Bengal Coal Company, Limited's Sodepur Nos. 9 and 10 pits and Seetalpore colliery in the Raniganj coalfield. Illustrated lantern lectures were delivered by Major C. W. T. Hook and by Mr. J. B. Auden, the subjects being "Air Raid Precautions" and "The Shaksam Expedition, 1937", respectively.

Three parts of the Transactions were published, forming part 3 of Volume 34, and parts 1 and 2 of Volume 35. The Government of India prize was awarded to Mr. B. Wilson Haigh for his paper entitled "Coal Carbonisation and some of its By-Products"; the Institute silver medal to Dr. F. G. Percival and Dr. E. Spencer for their joint paper entitled "Conglomerates and Lavas in the Singhbhum-Orissa Iron Ore Series" and to Dr. M. S. Krishnan for his paper entitled "Mineral Wool"; the Institute bronze medal to Dr. D. Swarup and Messrs. V. G. Iyer and A. H. K. Iyer for their joint paper entitled "An investigation into the possibilities of manufacturing carbon electrodes in India" and to Messrs. L. J. Barraclough and S. B. Hall for their joint paper entitled "Hydraulic stowing in India: Obtaining Supplies of Sand". The Pickering medal, presented by the

Institute for the best student in Mining at the Indian School of Mines, was awarded to Mr. V. Srivivasan for the session 1937-38, and to Mr. W. N. Batra for the session 1938-39.

(b) The Geological, Mining and Metallurgical Society of India.

At the close of the session 1938-39 the total membership on the roll was 190. In addition to the annual general meeting, eight ordinary general meetings were held. Five meetings were held in the Geological Laboratory, Presidency College, Calcutta; one at the Bhulanbararee colliery, Jharia coalfield, one in the Jharia Lecture Hall and one in the Municipal Hall, Asansol. Thirteen original papers on various aspects of Geology, Mining and Metallurgy were read and discussed at these meetings. During the year parts 3 and 4 of Volume X and parts 1 and 2 of Volume XI of the Quarterly Journal of the Society were issued. One bulletin was also published entitled "On uses and applications of sheet and waste mica". Four excursions to the following places were arranged:—(i) His Majesty's Mint, Strand Road, Calcutta; (ii) Bhulanbararee colliery (Jharia coalfield) of Messrs Bird & Company jointly with the Indian Mine Managers' Association; (iii) the Equitable Coal Company, Limited's Jamuria Colliery in the Raniganj coalfield jointly with the Indian Mine Managers' Association; (iv) the Tata Iron and Steel Company, Limited's Works, Jamshedpur, jointly with the Indian Mine Managers' Association.

(c) The National Association of Colliery Managers (Indian Branch).

The number of members of the National Association of Colliery Managers, Indian Branch, at the end of the year was 96. Some of the subjects dealt with by the Council during the year were:—Proposed amendments to the Indian Coal Mines Regulations, 1926; draft Coal Mines Safety (Stowing) Rules. The Government of India agreed to a request made by the Council that the age limit for applicants for the post of Junior Inspector of Mines should be 35 years. The request made to the Government of Bengal to grant service certificates to electrical supervisors, without examination, contingent upon such workmen having the necessary qualifications in respect of their length of service as supervisors at the time of the rules coming into force, was declined. Mr. W. V. Curtain officiated for Mr. J. Thomas, the Association's representative on the General Council in Great Britain, while the latter was on a visit to India. Mr. C. W. G. Hindley was joint representative of the National Association of Colliery Managers (Indian Branch) and the Indian Mine Managers' Association on the Asansol Mines Board of Health; Mr. V. C. Durham represented the Association on the Mining Education Advisory Board; Mr. W. McDonald represented the Association on the Rescue Stations Committee and Mr. W. V. Curtain was the representative on the Asansol Health and Baby Welfare Central Committee. Mr. H. S. Allen represented the Association on the Dhanbad and District Relief Committee and Messrs. T. Morrison and H. S. Allen were the Association's representatives on the Dhanbad and Collieries Cemetery Committee. Messrs L. S. Buxton and D. W. Baron represented the Association on the Railways and Collieries Advisory Board.

At the annual general meeting films from the Safety in Mines Research Board (Great Britain) were displayed, depicting the "Testing of flame-proof apparatus" and "Coal dust explosions".

(d) The Indian Mine Managers' Association.

The membership of the Indian Mine Managers' Association at the end of the year was 215. Among the activities of the Association during the year were the following:—(1) Revision of the Rules and Bye-laws of the Association; (2) consideration of the position of the members with second class colliery managers' certificates and an interview with the Chief Inspector of Mines regarding their employment as assistants at large mines; (3) consideration of the Electrical Supervisors' examination; (4) participation in the Railways and Collieries Advisory Board's meetings; (5) consideration of the Centralisation scheme of explosives' magazines; (6) consideration of the Coal Mines Safety (Stowing) Rules, 1939; (7) consideration of the amendments to the Coal Mines Regulations, 1926; (8) consideration of the amendments to the Coal Mines Rescue Rules, 1938; (9) consideration of the rates of depreciation of machinery, etc., for income-tax purposes; (10) interview with the Hon'ble Mr. Anugrah Narain Sinha, Minister for Finance and Local Self-Government, Bihar, regarding representation on the Jharia Mines Board of Health and other local bodies; (11) interview with the Chief Inspector of Mines regarding appointment of Indian examiners for the competency examinations; (12) participation with the Safety First Association of India, Bombay; (13) reading of Scientific papers; (14) printing of Coal Mines Act, Rules, Regulations and Bye-laws. Mr S. C. Ghosh was the representative on the Asansol Health and Baby Welfare Society (Central Committee) and on the Mining Education Advisory Board; Dr. R. P. Sinha was the representative on the Rescue Stations Committee; and Mr C. W. G. Hindley and Mr. W. V. Curran of the National Association of Colliery Managers (Indian Branch) represented this Association jointly with the National Association of Colliery Managers (Indian Branch) on the Asansol Mines Board of Health.

(e) The Railways and Collieries Advisory Board.

The Railways and Collieries Advisory Board dealt with the following subjects during the year:—(1) detention of wagons in the weigh-bridges and consequent demurrages; (2) unloading of and nominal wharfage charges for undelivered wagons at the destination; (3) security from depot-holders; (4) leaving of empty wagons at the buffer ends of sidings; (5) halting places and timings of the local trains; and (6) re-opening of Katras weigh-bridge.

Four meetings were held in 1939. The Divisional Superintendent, East Indian Railway, Asansol, was the President of the Board and the Coal Area Superintendent, East Indian Railway, Dhanbad, was the Honorary Secretary.

THE COAL MINES STOWING BOARD.

As a result of the recommendation of the Coal Mining Committee which was appointed in 1936, the Central Legislature at its Delhi session in 1938-39,

enacted the Coal Mines Safety (Stowing) Act which came into force from the 27th May 1939. This Act applies to the whole of British India except the Punjab and Assam.

The objects of the Act are :—

- (i) to make further provision for safety in coal mines by taking measures to facilitate or require therein the carrying out of the operations known as stowing; and
- (ii) to provide for the creation of a Fund for the assistance of such operation.

Under the Act, the Chief Inspector of Mines or an Inspector of Mines is empowered to close any coal mine to execute such work as the Chief Inspector of Mines or the Inspector of Mines may think fit, if in the opinion of the Chief Inspector or Inspector

- (a) the extraction or reduction of pillars in any part of the mine is likely to cause the crushing of pillars or the premature collapse of any part of the workings or otherwise endanger human life or the mine, or
- (b) adequate provision against the outbreak of fire or flooding has not been made by providing for the sealing off and isolation of any part of the mine or for restricting the area that might be affected by fire or flooding, as the case may be.

The Act provides for the creation of a Coal Mines Stowing Fund by the levy of an excise duty on coal and coke and the administration of the Fund by a body known as the Coal Mines Stowing Board. The Board which began to function from the 1st November 1939, consists of the following members :—

Chairman.

MR. N. MAHADEVA AYYAR, I.C.S.,

(appointed by the Central Government).

Members.

The Chief Inspector of Mines in India (*Ex-officio*).

MR. J. B. ROSS }
MR. C. A. INNES } nominated by the Indian Mining Association.

MR. M. N. MOOKERJEE—nominated by the Indian Mining Federation.

MR. A. L. OJHA—nominated by the Indian Colliery Owners' Association.

Secretary

KHAN SAHIB BAZLUL KARIM—appointed by the Board.

The Government of India have fixed the rate of duty on coal and soft coke at annas two per ton and on hard coke at annas three per ton from the 1st

December 1939. These duties are collected by the Railway Administrations along with the freight and the net receipts during the year after meeting the collection charges are paid to the Board.

The office of the Board was formed in Calcutta on the 1st November 1939, and four meetings of the Board were held before the end of the year.

The Board has formulated the principles which should govern grant of assistance from the Coal Mines Stowing Fund to owners, agents or managers of coal mines and the necessary draft rules have been submitted to the Government of India for their consideration.

THE RESCUE STATIONS COMMITTEE.

In Notification No M-955, dated the 20th April 1939, the Government of India notified the constitution of the Rescue Stations Committee as follows :—

1. Mr. N. Barraclough Inspector of Mines, nominated by the Chief Inspector of Mines in India.
2. „ S. F. Tarlton Nominated by the Indian Mining Association.
3. „ P. Basu Nominated by the Indian Mining Federation.
4. „ W. McDonald Nominated by the National Association of Colliery Managers.
5. Dr. R. P. Sinha Professor of Mining Engineering, Indian School of Mines, nominated by the Indian Mine Managers' Association.
6. Mr. P. C. Bose Nominated by the registered Trade Unions of Miners.
7. Rao Bahadur D. D. Thacker Nominated by the Central Government (to represent the interests of miners).

The first meeting was convened on the 8th May 1939, and Mr. N. Barraclough was elected President by a unanimous vote of the Committee.

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and of water and the approximate cost of operating the two stations were made.

After visiting a number of sites in both coalfields and considering their relative suitability as to location, underground support and supply of electricity and water, the site finally selected for the Rescue Station in the Jharia coalfield is in Bhagatdih mouza, at the west side of the Dhanbad-Jharia main road, $2\frac{1}{2}$ miles from Dhanbad railway station and $2\frac{1}{4}$ miles from Jharia town, and the site for the rescue station in the Raniganj coalfield is in Burra Dhemou mouza at the south side of the Grand Trunk Road at mile stone 142. Proceedings under the Land Acquisition Act, 1894, for the

acquisition of about 27 bighas of land in Bhagatdih mouza and 31 bighas of land in Burra Dhemo mouza were instituted without delay and in both cases the respective Provincial Governments permitted the proceedings to be expedited by summary acquisition procedure under Section 17 of the Act.

Detailed building plans, specifications, bills of quantities, conditions of contract, etc., were prepared and on the 15th November, the contract for the construction of the Rescue Station in the Jharia coalfield was accorded to Messrs. J. C. Banerjee, Limited, of Calcutta.

Tenders for the construction of the Rescue Station in the Raniganj coalfield were called for and construction of the station is about to be commenced.

LABOUR INQUIRY COMMITTEE.

In my last report reference was made to the appointment of the Labour Inquiry Committee by the Hon'ble Prime Minister for Bihar under a resolution passed by the Bihar Legislative Assembly on 3rd September 1937. The Committee is expected to publish its report in the near future.

LABOUR ASSOCIATIONS.

(a) *The Indian Colliery Labour Union.*

This Union is registered under the Indian Trade Union Act, 1926, and its headquarters are at Jharia. The number of members on the roll is given as 8,579, consisting chiefly of miners and skilled and unskilled labourers at mines. The rates of subscription are given as from three pies to four annas per month. It is claimed that the Union has assisted members in compensation claims and wage disputes. Lantern lectures were given during the year on welfare schemes.

(b) *The Indian Miners' Association.*

The Indian Miners' Association is registered under the Indian Trade Union Act and is affiliated with the National Trade Union Federation, Bombay. The membership at the end of the year was 7,000. The members are chiefly miners and other manual workers at mines. The rates of subscription vary from one anna to four annas per member according to the scale of pay. The Association conducted meetings and lantern lectures on general education, hygiene and temperance, etc. The Association has assisted its members in wage disputes and claims for compensation.

(c) *The Tata's Collieries Labour Association.*

This Association is registered under the Indian Trade Union Act. The number of members is given as 2,023, consisting chiefly of miners and skilled and unskilled labourers. The rates of subscription are given as from one anna to Re. 1-8 per month according to the scale of wages.

VISITORS TO THE COALFIELDS.

The Hon'ble Dr. Saiyid Mahmud, Minister for Education and Development, Bihar, visited the Jharia coalfield on the 7th and 8th January.

His Excellency Sir Maurice Hallett, K. C. S. I., C. I. E., I. C. S., Governor of Bihar, accompanied by the Deputy Commissioner, Hazaribagh, and the Chief Mining Engineer, Railway Board, visited Kargali and Bokaro collieries on the 24th January, and inspected the quarries, power house, surface plant and new houses for workers.

The Labour Inquiry Committee appointed by the Hon'ble Prime Minister of Bihar visited the Jharia coalfield from 12th to 15th February and held informal discussions with the representatives of the Indian Mining Association, Indian Mining Federation and the Indian Colliery Owners' Association and of labour. During their visit the Committee visited a number of collieries and had discussions with Government officials and representatives of the various Mining Associations.

The Hon'ble Mr. Anugrah Narain Sinha, Minister for Finance and Local Self-Government, Bihar, visited the Jharia coalfield from the 10th July to the 13th July. On the 11th July, the Hon'ble Minister visited Tetulmari Lepet Hospital and the Topchanchi Water Works; on the 12th July, East Ena and Puro Jharia collieries and in the afternoon the Indian School of Mines.

The Hon'ble Mr. Jaglal Chaudhuri, Minister for Excise and Public Health, Bihar, visited the Jharia coalfield from the 10th to the 12th August.

OFFICIAL DUTIES, 1939.

Mr. W. Kirby was Chief Inspector of Mines throughout the year.

Mr. N. Barraclough, Inspector of Mines, held charge of No. 1 Circle, throughout the year.

Mr. O. S. Cameron, Inspector of Mines, held charge of No. 2 Circle, from 1st January to 12th May. He was on leave throughout the remainder of the year.

Mr. N. G. Chatterjee was Inspector of Mines without circle from the 1st January to 12th May, and held charge of No. 2 Circle from the 13th May.

Rai Bahadur H. M. Mitra was Electric Inspector of Mines throughout the year.

Mr. H. K. Chatterjee, Junior Inspector of Mines, was on duty throughout the year.

Mr. S. S. Grewal, Junior Inspector of Mines, was on duty throughout the year.

Mr. V. S. Chopra, Junior Inspector of Mines, was on leave from 27th March to 6th April.

Mr. G. S. Jahhi, Assistant Inspector of Mines, was promoted to be a Junior Inspector of Mines from 22nd January. He was on leave from the 25th September to 16th October.

Mr. M. Yasin, Assistant Inspector of Mines, was on leave from the 6th November to 5th December.

Mr. I. J. Badhwar was appointed to be an Assistant Inspector of Mines from the 1st October.

The number of coal mines worked during the year was 619, which is 46 less than in the previous year. The number of metalliferous (including stone etc.) mines at work was 1,245 as compared with 1,288 in 1938.

During the year 1,210 mines were inspected, many of them being inspected several times. 2,947 separate inspections were made. The cause and circumstances of nearly all fatal accidents and serious accidents of importance, and all complaints of breaches of regulations and rules were investigated. Many inspections were made at the invitation of mine-owners, superintendents and managers desirous of obtaining advice on safety matters. In the major coalfields a large portion of the time of the Inspectors was occupied in investigating cases of actual or threatened damage to dwellings and roads by reason of the underground working of coal mines, in dealing with un-
inundat
Mines.

Orders were issued and withdrawn as follows :—

Section, Regulation or Rules.	Orders issued.	Orders withdrawn
Under Section 19 (1)	2	2
Under Section 19 (2)	17	4
Under Section 19 (1-A)	1	.

Exemptions, partial or complete, and permissions were granted and withdrawn as follows —

Regulation	Number of cases	Number withdrawn.
Under Coal Mines Regulation 53	1	..
Under Coal Mines Regulation 76 (2)	7	..
Under Coal Mines Regulation 87 H	1	..
Under Coal Mines Regulation 77 (4)	15	..
Under Coal Mines Regulation 93	1	..
Under Coal Mines Regulation 116	5	..
Under Coal Mines Regulation 123	1	..
Under Metalliferous Mines Regulation 55	1	..
Under Metalliferous Mines Regulation 74	1	..

Information was received of fifteen dangerous occurrences underground none of which involved loss of life. Five of these were due to outbreak of fire at several old fire areas; eight to spontaneous heating; one to an irruption of water; and one to a small "blower" of gas being ignited by an open light.

The number of original cases under the Land Acquisition (Mines) Act, 1885, at the end of 1939, stood at 765, thirteen of which were cases dealt with by the Government. The number of modifications of which only. In other provinces where Government owns the minerals, Provincial Governments were advised as to the restrictions necessary in cases where mine-owners sought permission to work minerals beneath railways, villages, etc.

I have the honour to be,

Sir,

Your most obedient servant,

W. KIRBY,

Chief Inspector of Mines in India.

REPORT ON
OF ROOF

ABAD MINE.

REFERENCES.

AREA OF ROOF WHICH FELL - - - - - 

POSITIONS OF DECEASED PERSONS - - - - - X X

POSITION OF INJURED PERSON - - - - - ⊗

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APPENDIX I.

Statistics of Mines and Minerals.

STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Province	District and Mineral Field.	Total output.	AVERAGE NUMBER OF							
			UNDERGROUND.					OPEN		
			Males.							
			Foremen and Males	Miners	Other skilled labour	Other unskilled labour	Total Males			
Foremen and Males	Miners.									
Bihar	Singbhum	Tons 1,543,031	..	..	..	.	..	278	IRON 3,175
	Total of preceding year	1,421,000		.	.		.	253	3,345	
	Difference	+122,031	..	..	..	.	.	+25	-170
Bihar	Singbhum	35,803	..	..	..	.		MAN 30	GANESE 369
Bombay	North Kanara	4,711	..		.			5	207	
	Panch Mahals	47,838	8	190	5	2	205	23	590	
	Total	52,549	8	190	5	2	203	28	797	
Central Provinces	Balasahat	298,548	23	400	5	140	568	230	3,217	
	Bhandara	123,432	5	32	2	19	58	93	1,729	
	Chhindwara	11,870			17	166	
	Nagpur	112,078	8	164	8	2	182	146	2,412	
	Total	546,028	38	596	15	161	808	486	7,524	

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No. 1—contd.

year 1939 at mines under the Indian Mine Act.

PERSONS EMPLOYED DAILY IN AND ABOUT THE DISTRICT

50

APPEN
STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Province	District and Mineral Field.	Total output	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males						
			Foremen and Males	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Males	Miners.
Madras . .	Vizagapatam .	Tons 34,640		..	..	..	.	MANGANESE	
	Grand Total (Manganese Ore) for 1939	609,020	44	786	20	163	1,013	566	9,962
	Grand Total of preceding year	766,341	32	718	13	201	964	648	11,854
	Difference .	-157,321	+12	+68	+7	-33	+49	-82	-1,892
Bihar . .	Manbhum . .	Oz	.	..	..	..	..	5	6
	Singhbhum .		1	..	..	5	6	..	..
	Total Gold for 1939	.	1	..	..	5	6	5	6
	Total of preceding year	16	..	4	..	..	4	2	11
	Difference .	-16	+1	-4	.	+5	+2	+3	-5
Baluchistan .	Zhob . . .	Tons 13,952	5	57	..	..	62	4	97
								CHROMITE	

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES

WORKINGS.						SURFACE						GRAND TOTAL.
Males			Females.	Total Males and Females	Total Underground and open workings.	Males				Females	Total Males and Females.	
Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and superintending staff	Skilled labour	Unskilled labour	Total Males			
ORE—contd												
12	14	1,320	628	1,848	1,848	12	55	54	101	23	123	1,971
172	1,164	11,664	9,656	21,722	22,736	223	304	2,057	2,584	2,183	4,717	27,452
287	1,684	14,433	11,798	28,229	27,193	212	303	2,108	2,711	2,388	8,099	32,292
—95	—500	—2,569	—1,036	—4,607	—4,456	+11	+1	—139	—127	—255	—382	—4,840
LD.												
2	2	15	.	15	15	8	15	33	56	62	117	132
..	4	4		4	10	1		.	1		1	11
2	6	19		19	25	6	15	35	56	62	118	143
2	3	18	.	18	23	3	7	40	50	57	107	129
..	+3	+1		+1	+3	+3	+8	—5	+6	+5	+11	+14
ORE.												
3	12	116	..	116	178	4	2	20	26	..	26	264

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province,	District and Mineral Field	Total output	AVERAGE NUMBER OF						
			UNDERGROUND					OPEN	
			Males						
			Foremen and Mates	Miners	Other skilled labour	Other unskilled labour	Total Males	Foremen and Mates	Miners
Bihar . .	Singhbhum	Tons 4,176	.	.	.	.	.	25	297
	Grand Total (Chromite Ore) for 1939	18,423	5	57	..	.	62	29	294
	Grand Total of preceding year	27,086	1	17	.	.	18	54	492
	Difference . .	-8,659	+4	+40	.	.	+44	-25	-68
Bihar . .	Singhbhum	360,216	3	.	498	1,341	1,842	..	COPPER
Central Provinces	Jubbulpore	..	..	..	..	..	..	3	..
	Grand Total (Copper Ore) for 1939	360,216	3	..	498	1,341	1,842	3	..
	Total of preceding year	288,076	3	414	5	1,060	1,482	..	..
	Difference . .	+72,140	..	-414	+493	+281	+360	+3	..
Bengal . .	Bankura . .	Cwt. 15	..	..	..	..	..	..	MI

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES													GRAND TOTAL.
WORKINGS					Total Underground and open workings	SURFACE							
Males			Females	Total Males and Females		Males				Females	Total Males and Females		
Other skilled labour	Other unskilled labour	Total Males				Clerical and superintending staff	Skilled labour	Unskilled labour	Total Males				
ORE—contd													
13	22	337	364	721	721	10	1	10	21	29	50	771	
16	34	473	364	837	899	14	3	90	107	20	136	1,035	
18	37	591	379	961	979	19	6	142	167	8	175	1,154	
—2	—3	—118	—6	—124	—80	—3	—3	—52	—60	+21	—39	—119	
ORE													
..				.	1,842	57	356	604	1,017	226	1,243	3,085	
		3	2	5	5	1		1	2		2	7	
		3	2	5	1,847	58	356	605	1,019	226	1,245	3,092	
.	.				1,482	49	272	626	947	308	1,255	2,737	
.		+3	+2	+5	+365	+9	+84	—21	+72	—82	—10	+355	
CA													
..	23	23	39	62	62	4	.	1	5	..	5	67	

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province	District and Mineral Field	Total output Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males.					Foremen and Mates.	Miners.
			Foremen and Mates.	Miners	Other skilled labour	Other unskilled labour	Total Males		
Punjab	Jhelum	123,073	39	413	51	161	603	1	SA
	Mianwall	14,801		116			116		
	Shahpur	28,076	5	95	5	39	145		
	Grand Total (Salt) for 1939	165,950	35	624	57	200	916	1	..
	Grand Total of pre- ceding year	164,674	33	603	55	212	905	1	..
	Difference .	+1,276	+2	+19	+2	-12	+11	..	..
Madras	Salem	29,003					..	31	MAGNE 694
	Total of preceding year	23,052						21	330
	Difference .	+5,851			..	..	..	+10	+364
Bihar	Hazaribagh	822	..		..	..	..	..	STEAL 3
	Slughbhum	133	..	..	..		..	10	5
	TOTAL	955		..	..	..	..	10	8
Central Pro- vinces	Jubbulpore	1,670	2	4	3	2	11	10	25

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES													
WORKINGS						SURFACE							GRAND TOTAL
Males			Females	Total Males and Females	Total Underground and open workings	Males				Females	Total Males and Females		
Other skilled labour	Other unskilled labour	Total Males				Clerical and supervising staff	Skilled labour	Unskilled labour	Total Males				
LT	17	18		18	673	1	68	250	319		319	992	
..	..	.		.	116	.	.	77	77	.	77	193
..	.	..	.	.	145	1	8	63	62	.	62	207
.	17	18		18	934	2	76	380	458	..	453	1,392	
..	21	22	.	22	927	2	130	234	466	.	460	1,393	
	-4	-4		-4	+7	.	-54	+46	-8	.	-8	-1	
SITE													
1	1,047	1,773	814	2,587	2,587	18	70	101	189	.	189	2,776	
..	636	987	532	1,519	1,519	16		1	17	.	17	1,536	
+1	+411	+786	+282	+1,068	+1,068	+2	+70	+100	+172		+172	+1,240	
TITE.													
11	43	62	38	100	100	.	6		6	.	6	106	
.	.	7	10	17	17	1	.	2	3	4	7	24	
11	43	60	43	117	117	1	6	2	9	4	13	130	
4	33	74	73	147	153	4	2	14	20	19	39	197	

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons	AVERAGE NUMBER OF						
			UNDERGROUND,					OPEN	
			Males				Total Males	Foremen and Mates.	Miners.
			Foremen and Mates.	Miners	Other skilled labour.	Other unskilled labour.			
Madras . .	Nellore . .	70	.	..	..	11	11	..	..
United Provinces.	Hamirpur . .	79		15	.	1	16	.	..
	Grand Total (Statistic) for 1933	2,774	2	19	3	14	38	12	33
	Grand Total of preceding year	2,297	1	27	..	23	51	2	7
	Difference . .	+477	+1	-8	+3	-9	-13	+10	+26
Bihar . .	Monghyr . .	567	..	..	.	.	..	1	SLA 4
Punjab .	Gurgaon . .	1,631	..	..	..	..	..	8	41
	Kangra . .	6,790	.	.	.	.	.	65	128
	Total . .	8,421	..	..	..	..	..	73	169
	Grand Total (State) for 1933.	8,958	..	..	..	..	..	71	173
	Grand Total of preceding year.	7,733	..	..	..	..	..	69	159
	Difference . .	+1,225	..	..	..	..	..	+5	+15

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

WORKINGS					and open workings	SURFACE							GRAND TOTAL.
Males			Females	Total Males and Females		Males,				Females	Total Males and Females		
Other skilled labour	Other unskilled labour	Total Males				Chief and supervising staff	Skilled labour	Unskilled labour	Total Males				
.					11						.	.	11
30		30	.	30	46		42	.	42	..	42	88	
45	83	173	121	294	332	5	50	16	71	23	94	426	
40	98	147	52	199	250	3	30	3	36	8	42	292	
+5	-15	+26	+69	+95	+82	+2	+20	+13	+35	+17	+52	+124	
TE.													
7	16	28	3	31	31	.		..	.		.	31
58	60	165		165	165	1		2	3	.	3	168	
81	123	397		397	397	4	2	2	8	.	8	405	
137	183	562		562	562	5	2	4	11	.	11	573	
144	190	590	3	593	593	5	2	4	11	..	11	604	
151	178	536	7	543	543	3	2	4	9	.	9	532	
+13	+21	+54	-4	+50	+50	+2	.	..	+2	.	+2	+52	

APPEN
STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output. Tons	AVERAGE NUMBER OF							
			UNDERGROUND.					OPEN		
			Males							
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males	Foremen and Mates	Miners.	
Madras . .	Nellore . .	70			..	11	11	.	..	
United Pro- vinces.	Kamlepur . .	79		15	.	1	16		..	
	Grand Total (Steatite) for 1939	2,774	2	19	3	14	38	13	33	
	Grand Total of preceding year	2,597	1	27	.	23	51	2	7	
	Difference . .	+477	+1	-8	+3	-9	-13	+10	+26	
Bihar . .	Monghyr . .	567	..	..	..	.	..	1	SLA 4	
Punjab .	Gurgaon . .	1,631	..	..	.	.	..	8	41	
	Kangra . .	6,799		.	..	.	..	65	125	
	Total . .	8,421	..	.	..	.	..	73	166	
	Grand Total (State) for 1939.	8,968	..	..	..	..	..	71	173	
	Grand Total of preceding year.	7,733	..	..	..	..	.	69	158	
	Difference . .	+1,235	..	..	..	..	..	+5	+15	

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

WORKING*					and Total Underground open workings.	SURFACE.							GRAND TOTAL.
Males.			Females.	Total Males and Females.		Males				Females.	Total Males and Females.		
Other skilled labour	Other unskilled labour	Total Males				Chief and superintending staff	Skilled labour	Unskilled labour	Total Males.				
..			.		11								11
30		20	.	30	46	.	42		42	.	42		83
43	63	173	121	294	332	5	66	16	71	23	94		426
40	93	147	52	199	250	3	30	3	33	6	42		292
+5	-15	+26	+60	+95	+82	+2	+20	+13	+33	+17	+52		+124
TE													
7	16	26	3	31	31			.	.	.	.		31
56	66	165		165	165	1		2	3	.	3		168
81	123	397		397	397	4	2	2	8	.	8		405
137	183	562		562	562	6	2	4	11	..	11		573
144	190	590	3	593	693	5	2	4	11	..	11		604
181	178	536	7	643	543	3	2	4	9	.	9		552
+13	+21	+54	-4	+50	+50	+2		..	+2	..	+2		+52

APPENDIX STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province	District and Mineral Field	Total output.	AVERAGE NUMBER OF					
			UNDERGROUND,				OPEN	
			Males				Foremen and Mates,	Miners
			Foremen and Mates	Miners	Other skilled labour	Other unskilled labour.		
Bihar	Ranchi Shahabad	Tons						LIME
		12,313				.	3	72
		483,031				..	99	653
	Total	500,364	.	.	..	..	103	727
Central Provinces.	Bilaspur Jubbulpore	57,122		.	.	.	10	89
		482,533	..	.	..	.	40	800
	Total	539,657				.	50	779
Madras	Coimbatore	158,921	.			..	3	239
Punjab	Attock Mianwali Rawalpindi	272,148	.		.	.	3	23
		23,000	.	..	..	.	6	.
		6,600			.	.	.	..
	Total	316,748	..	..	..	..	9	22
	Grand Total (Time-stone) for 1939	1,515,600	..	.	..	.	164	1,767
	Grand Total of preceding year.	1,582,038	..	..	.	.	239	1,557
	Difference	-67,569	..	.	..	.	-75	-10

DIX I—*contd.*AND MINERALS—*contd.*No. 1—*contd.*year 1939 at mines under the Indian Mines Act—*contd.*

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES

WORKINGS,					Total Underground and over workings,	SURFACE							GRAND TOTAL
Males						Males				Females	Total Males and Females		
Other skilled labour	Other unskilled labour	Total Males	Females	Total Males and Females	Chief and supervisory staff	Skilled labour	Unskilled labour	Total Males					
STONE													
1	3	79	32	111	111	3	6	9	10	8	16	127	
198	820	1,762	518	2,280	2,280	196	199	104	498	25	523	2,803	
189	823	1,641	550	2,391	2,391	189	203	106	509	31	539	2,930	
176	24	300	121	421	421	5	36	20	62	59	121	542	
58	357	1,155	1,390	2,545	2,545	21	5	15	41	10	51	2,596	
245	390	1,455	1,501	2,956	2,956	27	41	45	103	59	172	3,128	
.	.	212	244	455	455	3			3		3	480	
4	418	447		447	447							447	
.	200	206	8	214	214							214	
.	30	50	.	30	30	1			1		1	31	
4	648	653	8	691	691	1			1		1	692	
439	1,851	4,221	2,303	6,524	6,524	230	244	141	617	100	715	7,239	
545	2,600	3,251	5,914	9,165	9,165	285	252	432	669	147	1,106	10,271	
-126	-839	-1,020	-1,611	-2,641	-2,641	-53	-8	-291	-374	-37	-311	-3,032	

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field	Total output	AVERAGE NUMBER OF						
			UNDERGROUND.				OPEN		
			Males						
			Foremen and Mates.	Miners	Other skilled labour	Other unskilled labour	Total Males.	Foremen and Mates	Miners
Bengal . .	Durkhum . .	Tons. 69,664	..	.	.	.	STONE (CHIEFLY		
								1	260
Bihar .	Gaya . .	102,974	.	.	.	.	.	17	300
	Monghyr . .	94,173	..	.	..	.	.	20	..
	Santal Parganas .	404,260	.	.	.	..	.	105	652
	Shahabad . .	79,107	.	.	.	..	.	..	..
	Singbhum .	52,235	..	.	.	.	.	21	319
	Total	723,749	..	..	..	..	..	183	1,271
Bombay	Bombay .	20,851	..	..	..	..	.	8	102
	Bombay Suburban	28,370	..	..	..	.	..	..	2
	Kaira . .	20,260	..	..	..	..	.	2	..
	Surat . .	72,237	..	..	..	..	.	10	15
	Thana . .	13,160	..	..	.	..	..	5	..
	Total .	351,635	.	..	..	..	..	25	119
Central Provinces.	Akola . .	22,050	..	..	..	..	..	4	..
	Amraoti . .	16,373	..	..	..	..	..	3	..
	Nagpur . .	21,756	..	..	..	..	..	2	..
	Total .	60,179	..	..	..	..	..	9	..

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.												
WORKINGS					Total Underground and open workings.	SURFACE						
Males.			Females.	Total Males and Females.		Males				Females.	Total Males and Females.	GRAND TOTAL.
Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.			
IGNEOUS ROCK)												
7	102	370	..	370	370	26	47	315	401	141	542	912
29	166	512	206	718	718	.			..		.	718
108	433	661	422	983	983	6	2	65	43	.	43	1,025
464	178	1,399	274	1,673	1,673	122	374	371	857	405	1,272	2,945
	265	265	20	285	285	.		..		..	.	285
23	429	606	526	1,334	1,334	13	8	36	57	14	71	1,405
610	1,471	6,545	1,448	4,993	4,993	141	384	442	967	419	1,386	6,379
50	177	537	34	671	371	24	5	38	67	28	95	466
14	48	64	..	64	64	2	39	66	66	.	66	160
15	.	17		17	17	3	4	21	28	.	28	45
65	152	262	206	468	468	11	3	4	18		18	486
..	88	93	55	148	148	5			5		5	153
164	465	773	295	1,068	1,068	45	50	119	214	28	242	1,310
..	73	77	56	133	133	1			1	.	1	134
90	.	93	45	138	138	1			1	.	1	139
..	60	82	80	162	162	1		.	1	.	1	163
90	153	252	131	433	433	3	.	.	3	..	6	436

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province	District and Mineral Field.	Total output. Tons.	AVERAGE NUMBER OF							
			UNDERGROUND.					OPEN		
			Males.							
			Foremen and Miners.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Miners.	Miners.	
STONE (CHIEFLY										
Delhi . .	Delhi . .	77,212	..	..	..	..	..	11	106
Madras	Chingleput .	94,302	..	..	..	..	..	..	..
	East Godawari .	9,016	..	..	..	..	..	..	..
	Guntur .	33,235	..	..	..	..	..	..	16
	Kistna . .	24,031	..	..	..	..	..	..	43
	Total	163,584	..	..	..	..	..	..	59
Punjab	Jhang . .	30,531	..	..	..	..	..	7	26
	Jhelum . .	51,220	..	..	..	..	..	6	5
	Total .	81,751	..	..	..	..	..	12	33
Sind .	Sukkur . .	23,863	..	..	..	..	..	7	54
United Provinces	Allahabad . .	110,559	..	..	..	..	..	22	..
	Banda . .	640	..	..	..	..	..	..	..
	Jhansi . .	22,433	..	..	..	..	..	12	119
	Total .	133,632	..	..	..	..	..	34	119
	Grand Total (Stone) for 1939.	1,702,304	..	..	..	..	..	262	2,021
	Grand Total of preceding year.	1,456,711	..	..	..	..	..	233	2,095
	Difference .	245,593	..	..	..	..	..	29	74

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.

WORKINGS						SURFACE.							GRAND TOTAL.
Males.			Females	Total Males and Females.	Total Underground and open workings	Males				Females	Total Males and Females.		
Other skilled labour.	Other unskilled labour.	Total Males				Clerical and superintending staff	Skilled labour.	Unskilled labour.	Total Males.				
IGNEOUS ROCK—contd													
31	703	851	356	1,207	1,207	1	.	.	1	..	1	1,208	
.	620	620	466	1,086	1,086	3	20	68	91	41	132	1,218	
56	56	56	12	68	68	.	.	..	.	.	..	68	
11	120	147	18	165	165	.	..	..	.	..	..	165	
.	.	43	43	43	43	6	.	55	61	12	73	116	
67	740	866	496	1,362	1,362	9	20	123	152	53	205	1,567	
1	70	106	22	128	128	.	.	.	.	.	.	128	
.	119	129	11	140	140	3	5	16	24	.	24	164	
1	160	235	33	268	268	3	5	16	24	.	24	292	
.	38	119	21	140	140	.	1	1	2	.	2	142	
300	388	690	243	933	933	16	1	.	17	.	17	950	
1	5	6	7	13	13	.	..	1	1	.	1	14	
125	.	250	43	299	299	6	60	45	111	117	228	527	
428	373	952	293	1,245	1,245	22	61	46	129	117	246	1,491	
1,426	4,254	7,963	3,123	11,086	11,086	260	563	1,063	1,893	758	2,651	13,737	
1,774	2,611	6,813	2,215	9,028	9,028	234	471	1,103	1,828	697	2,525	11,553	
-445	+1,643	+1,150	+908	+2,653	+2,058	+6	+97	-33	+65	+61	+126	+2,184	

STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province	District and Mineral Field.	Total output. Tons	AVERAGE NUMBER OF							
			UNDERGROUND.					OPEN		
			Males.							
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates	Miners.	
Bihar . .	Shahabad . .	30,888	..	..	..	.	..	8	SAND 33
	Total of preceding year.	18,612	.	.	..	.	..	8	..
	Difference .	+12,276	..	.	.	.	..	+5	+23
Bihar .	Siaghbham .	Tons 14,203						Figures	GRA included	
Bombay {	Kaira . .	25,170	.	..	..	..	.2	6	..
	Thana . .	481						Figures	included	
	Total .	25,651	..	..	.	..	..	..	..
Madras .	Chingleput . .	13,431						Figures	included	
	Grand Total (Gravel) for 1939	53,285	.	.	..	..	..	6	..
	Grand Total of preceding year	47,542						Figures	included	
	Difference .	+5,743	..	..	..	..	..	+6	..

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES												GRAND TOTAL.
WORKINGS.					Total Underground and open workings.	SURFACE						
Males.			Females.	Total Males and Females.		Males.				Females.	Total Males and Females.	
Other skilled labour.	Other unskilled labour.	Total Males				Clerical and superintending staff.	Skilled labour	Unskilled labour	Total Males.			
STONE.												
..	100	121	42	160	160	3	..	.	3		0	163
19	55	77	26	103	103	3	..	19	22	8	80	183
-19	+45	+54	+23	+77	+77		.	-19	-19	-8	-27	+80
VEL.												
In those for Stone.												
	135	141	33	174	174	2	.	45	47	100	147	321
In those for Stone												
.	135	141	33	174	174	2	.	45	47	100	147	321
In those for Stone												
..	135	141	33	174	174	2	..	45	47	100	147	321
In those for Manganese and Stone												
..	+135	+141	+33	+174	+174	+2		+45	+47	+100	+147	+321

APPEN
STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province	District and Mineral Field	Total output Tons	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males.	Foremen and Mates.	Miners.
Bombay		Tons.						MUR	
	Bombay Suber- ban	5,980						Figures included	
	Katra .	1,462						Figures included	
	Thana .	9,166						Figures included	
	Total	15,608						Figures included	
	Grand Total (Murem) for 1939	15,608						Figures included	
	Grand Total of preceding year.	43,763	..	..	.	..	..	6	..
	Difference	-27,855	..	..	..	..	..	-6	..
Bengal .		Tons						FIRE	
	Birbhum .	2,500	..	.	..	..	..	1	60
	Burdwan .	9,436	..	..	.	.	..	1	63
	Total .	11,936	..	..	..	.	..	2	113
Bihar . .	Manbhum . .	6,090	..	..	..	.	..	4	85
Central Pro- vinces	Jubbulpore .	34,056	..	..	..	..	..	6	5
	Grand Total (Fire- clay) for 1939	53,862	..	..	..	..	..	12	204
	Grand Total of preceding year.	46,407	1	30	12	32	75	12	204
	Difference .	+7,455	-1	-30	-12	-32	-75	..	..

DIX I—contd.

AND MINERALS—contd

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES													
WORKINGS					Total Underground and open workings	SURFACE							GRAND TOTAL
Males			Females	Total Males and Females		Males				Female*	Total Males and Females		
Other skilled labour	Other unskilled labour	Total Males				Chief and supervising staff	Skilled labour	Unskilled labour	Total Males				
RUM													
in those for stone													
in those for Gravel													
in those for Stone													
in those for Gravel and Stone													
in those for Gravel and Stone													
.	81	87	19	104	106	2	..	27	29	58	87	193	
.	-81	-87	-19	-100	-106	-2	..	-27	-29	-58	-87	-193	
CLAY													
.		51	20	71	71	1	20	..	21	..	21	92	
16	1	81	..	81	81	7	8	18	33	24	57	133	
16	1	132	20	152	152	8	28	18	54	24	78	230	
5	5	102	35	137	137	3	3	9	15	8	21	158	
..	248	250	191	450	450	3	.	34	37	..	37	487	
23	254	403	246	739	739	14	31	81	106	30	136	875	
49	177	445	275	717	702	23	3	69	95	53	148	940	
-26	+77	+51	-29	+22	-53	-0	+23	-9	+11	-23	-12	-63	

APPEN
STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Province	District and Mineral Field.	Total output Tons	AVERAGE NUMBER OF						
			UNDERGROUND.					OPEN	
			Males					Foremen and Mates	Miners
			Foremen and Mates	Miners.	Other skilled labour.	Other unskilled labour.	Total Males		
Bihar .		Tons							CHINA
	Bhagalpur	1,148	1	23	.	27	51	4	26
	Singhbhum	10,203	.	..	..	.	.	28	178
	Total	11,351	1	23	..	27	51	32	204
Central Pro- vinces.	Jubbulpore	356	.	..	.	..	.	.	15
Delhi .	Delhi	2,299	3	11	28	.	42	..	8
Punjab .	Jhelum	.	1	3	.	.	4	..	..
	Grand Total (China clay) for 1939	14,026	5	37	28	27	97	32	227
	Grand Total of preceding year.	11,007	4	78	7	27	116	24	163
	Difference	+3,019	+1	-41	+21	..	-10	+8	+64
Bengal .	Burdwan	Tons 11,636	..	..	..	..	..	2	67
Punjab .	Attock	65,719					Figures included in those		
	Grand Total (Clay) for 1939	77,355	..	..	..	..	.	2	67
	Grand Total of preceding year	61,565	..	..	..	..	.	2	50
	Difference	+15,790	..	..	.	..	..	..	+17

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.													GRAND TOTAL
WORKINGS					Total Underground and open workings.	SURFACE.							
Males.			Females.	Total Males and Females.		Males.				Females.	Total Males and Females.		
Other skilled labour.	Other unskilled labour.	Total Males.				Clerical and supervising staff.	Skilled labour.	Unskilled labour.	Total Males.				
CLAY													
.	35	63	30	95	146	1	..	..	1	17	18	164
4	178	366	628	1,014	1,014	40	57	189	288	304	590	1,304	
4	211	431	658	1,100	1,100	41	67	180	287	321	608	1,768	
..	.	.	16	31	31	1	..	.	..	..	1	32
8	.	16	..	16	58	.	.	..	..	..	..	88
.	.	.	.	.	4	.	..	..	.	..	..	4
12	211	407	674	1,156	1,253	41	57	189	287	321	609	1,862	
2	182	371	422	793	909	32	30	149	211	202	413	1,322	
+10	+29	+96	+232	+363	+214	+9	+27	+40	+76	+119	+198	+540	
AY													
22	6	97	23	120	120	..	4	..	4	.	4	124	
for Lime stone.													
22	6	97	23	120	120	..	4	..	4	..	4	124	
20	9	81	21	102	102	.	3	..	3	..	3	105	
+2	-3	+18	+2	+18	+18	..	+1	..	+1	..	+1	+19	

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES

WORKING*						Total Underground and open workings	SURFACE.						GRAND TOTAL
Males			Females	Total Males and Females.	Males				Females.	Total Males and Females.			
Other skilled labour	Other unskilled labour.	Total Males.			Clerical and supervising staff.		Skilled labour.	Unskilled labour.			Total Males.		
TES													
19	.	43	31	74	74	3	..	..	..	3	77	
.	..	.	.	10	10	1	4	5	10	15	25	
19		43	31	74	84	3	1	4	5	10	103		
13	13	41	26	67	79	1	..	2	2	11	92		
-7	-13	+2	+5	+7	+6	+2	+1	+2	+2	-1	+5	+11	
TITE													
for Gypsum.													
for Gypsum													
				
TOS				.	244	..	..	..	..	12	12	256
	1	2		2	2	..	..	..	..	..	..	2
	1	2	.	2	246	..	..	..	..	12	12	258
	3	4	..	4	4	..	..	..	..	..	..	4
.	-13	-2		-13	+242	..	..	..	..	+12	+12	+254

APPEN STATISTICS OF MINES

Table

Number of workers and output of minerals during the

Province.	District and Mineral Field.	Total output Tons.	AVERAGE NUMBER OF						
			UNDERGROUND.				OPEN		
			Males.						
			Foremen and Mates.	Miners.	Other skilled labour.	Other unskilled labour.	Total Males	Foremen and Mates	Miners.
Central Pro- vinces	Chanda . .	Tons. 229	1	4	..	..	5	..	..
	Jubbulpore	29							
							Figures	included	in those
	Grand Total (Ochre) for 1939.	258	1	4	..		5	..	..
	Grand Total of preceding year	246	1	4	..	..	5	..	..
	Difference .	-12		.	..	..	..	.	..
Bihar	Singhbhum .	766	.	.	..		.	.	KYA 15
Madras	Nellore . .	7	.	..	.	..	.	.	3
	Grand Total (Kyanite) for 1939.	773	..	..	.	..	..	..	18
	Grand Total of preceding year.	832	..	..	..	..	..	4	76
	Difference .	-59	..	..	..	..	..	-4	-58
Madras .	Trichinopoly .	10,188	..	..	.	..	..	..	GYP ..
Punjab .	Jhelum . .	7,842							Figures included
	Grand Total (Gypsum) for 1939	18,030	..	..	..	..	..	..	..
	Grand Total of preceding year.	23,242	..	..	..	..	..	..	..
	Difference .	-5,212	.	.	..	..	..	..	..

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES												
WORKING*					Total Underground and open workings	SURFACE.				Females.	Total Males and Females.	GRAND TOTAL.
Males.			Females.	Total Males and Females		Males.						
Other skilled labour	Other unskilled labour	Total Males				Clerical and supervising staff	Skilled labour	Unskilled labour	Total Males.			
RE												
for China clay					5			4	4	4	8	13
	..				5			4	4	4	8	13
					5			4	4	4	8	13
									
NITE												
			5	20	20				..	..	..	20
		3		3	3			..	..	..	..	3
		3	5	23	23			..		..	..	23
		80	79	159	159	2		..	2	..	2	161
		—77	—74	—156	—156	—2			—2	..	—2	—158
SUM.												
	153	153	314	467	467	12		105	117	..	117	434
in those for Salt												
	153	153	314	467	467	12	..	105	117	..	117	434
	101	101	86	187	187	10	..	60	70	33	103	293
..	+32	+52	+223	+280	+280	+2		+45	+47	—23	—9	+139

APPEN
STATISTICS OF MINES

Table
Number of workers and output of minerals during the

Province,	District and Mineral Field,	Total output Tons,	AVERAGE NUMBER OF						
			UNDERGROUND.						
			Males.					Foremen and Mates,	Miners,
			Foremen and Mates	Miners,	Other skilled labour	Other unskilled labour	Total Males,		
Bombay	Kaiza .	Tons. ..	.	.	.	.	.	..	BAU ..
Central Pro- vinces	Jubbulpore	5,527				.		1	5
	Grand Total (Bau- xite) for 1939	5,527	.	.		.	.	1	5
	Grand Total of preceding year	10,134		.		.		3	17
	Difference .	-4,607	..	.	..	..	..	-2	-12
Rajputana .	Ajmer-Merwara .	Tons 9	.	..	.	..	..	1	BER 16
	Total of preceding year,	17	..	..	..	..	..	3	23
	Difference .	-8	..	.	.	..	..	-1	-7
Rajputana .	Ajmer Merwara .	Tons 203	..	..	..	..	..	3	FELS 9
	Total of preceding year,	605	..	..	..	..	..	2	10
	Difference .	-312	..	..	..	..	..	+1	-1

DIX I—contd.

AND MINERALS—contd.

No. 1—contd.

year 1939 at mines under the Indian Mines Act—contd.

PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.													GRAND TOTAL.	
OPEN WORKINGS					Total Underground and open workings	SURFACE.								
Males			Females	Total Males and Females.		Males.				Females	Total Males and Females.			
Other skilled labour	Other unskilled labour	Total Males				Clerical and supervising staff	Skilled labour.	Unskilled labour.	Total Males					
XITE.														
						1		21	22	4	26		26	
.	16	22	31	53	53	1	.	2	3	3	6		59	
	16	22	31	53	63	2	..	23	25	7	32		85	
.	22	42	55	97	97	1	.	10	11	1	12		109	
	-6	-20	-24	-44	-44	+1	.	+13	+14	+6	+20		-24	
YL.														
.		17		17	17	1	.	..	..	..	1		18
.			.	23	23	2	..	..	2	..	2		27
.		+17	.	-8	-8	-1	..	..	-2	..	-1		-9
PAR.														
..	11	23	.	23	23	..	.	..	..	..	..		23
.	5	17	..	17	17	1	..	..	1	..	1		18
..	+6	+6	..	+6	+6	-1	.	..	-1	..	-1		+5	

Table

Statement of total mining population in Coal Mines in British India

NAME OF PROVINCE	Name of coalfield or District	TOTAL NUMBER ATTENDING WORK.							
		MALES.				FEMALES.			
		Underground	Open workings	Surface	Total	Open workings	Surface.	Total	Total Males and Females
Assam	Khasi and Jaintia	46	..	59	123	..	45	45	168
	Makum	1,626	80	421	2,127	32	103	135	2,262
	Namra	243	..	139	382	..	..	..	382
	Total	1,915	80	619	2,612	32	148	180	2,812
Baluchistan	Sor Range	102	1	1	104	..	..	..	104
	Khoet	95	..	12	107	..	..	..	107
	Total	197	1	13	211	..	..	..	211
Bengal	Raniganj	49,643	250	12,317	62,250	175	6,792	6,967	69,217
Bihar	Raniganj	7,291	257	1,779	9,327	172	1,275	1,447	10,774
	Jharia	67,753	1,501	20,791	90,045	1,336	10,456	11,842	101,887
	Bokaro	3,534	5,165	1,063	10,862	2,725	570	3,295	13,957
	Giridih	4,769	2	858	5,629	2	393	395	6,024
	Karanpura	1,435	1,149	942	3,526	449	249	698	4,224
	Jainty	724	..	243	967	..	65	65	1,032
	Daltonganj	103	..	72	175	..	16	16	191
	Total	85,809	8,074	26,643	150,331	4,734	13,024	17,758	138,089
Central Provinces	Vardha Valley	2,421	..	577	2,998	..	188	188	3,186
	Pench Valley	5,806	454	2,456	11,806	553	1,116	1,669	13,477
	Yeotmal	412	..	69	481	..	17	17	498
	Total	11,729	454	3,104	15,287	553	1,321	1,874	17,161
Orissa	Hingir Rampur	467	..	102	569	..	222	222	791
Punjab	Salt Range	2,431	55	1,175	3,661	..	41	41	3,702
	GRAND TOTAL	132,949	8,514	43,978	204,941	5,494	21,543	27,042	231,983

No. 1-A.

on a day in the selected week in February 1940.

TOTAL NUMBER PREVENTED FROM ATTENDING								GRAND TOTAL
MALES				FEMALES				
Under-ground	Open working	Surface	Total	Open working	Surface	Total	Total Males and Females	
7	.	9	16	.	8	8	24	102
1,059	23	109	1,189	13	37	50	1,239	3,501
65		51	116			..	116	408
1,130	23	165	1,321	13	45	58	1,379	4,191
..			..		.		..	104
.	.		.	.	..	..	.	107
				.	..	.	..	211
3,922	3	644	4,569	4	737	741	5,310	74,527
310	6	106	422	5	02	97	519	11,203
2,059	81	560	2,700	55	354	409	3,109	104,998
264	431	306	1,001	332	43	375	1,376	15,333
3,524	.	142	3,666	..	127	127	3,793	9,817
164	237	67	468	87	2	89	657	4,781
10	..	..	10	..	..	..	10	1,042
..	..		..	..	..	..	..	101
6,331	755	1,161	8,267	479	618	1,097	9,364	147,453
47	..	19	66	..	1	1	67	3,253
841	19	95	938	23	40	63	1,021	14,498
25	.	..	25	..	..	..	25	523
913	19	117	1,049	23	41	64	1,113	18,274
3	..	..	3	..	..	..	3	794
163	..	67	230	..	1	1	231	3,913
112,462	800	2,177	15,439	519	1,462	1,981	17,400	249,383

Table
Average hours worked per week in each

Mineral Field	Overmen and Sirdars Foremen and Mates	UNDERGROUND.			
		Miners.	Loaders	Skilled Labour.	Un- skilled Labour
Jharla Coalfield (Bihar)	49	46	46	47	47
Raniganj Coalfield (Bengal)	51	46	46	48	47
Girdih Coalfield (Bihar)	46	43	43	46	46
Assam Coalfields	51	49	51	52	51
Punjab „	46	43	41	44	44
Baluchistan Coalfield	37	38	37	40	42
Pench Valley Coal (Central Provinces)	51	48	49	50	50
Bihar Mica	45	47	..	47	47
Madras Mica	47	46	..	47	47
Central Provinces Manganese	49	48	..	49	45
Central Provinces Limestone . . . . .	..	..	..	..	..
Bihar Iron . . . . .	..	..	..	..	..
Punjab Salt	44	46	..	52	52
Bihar China clay	39	31	..	..	28
Punjab Slate . . . . .	..	..	..	..	..

DIX I—contd.

No. 2.

important mining field during the year 1939.

OPEN WORKINGS.						SURFACE.			
Overmen and Sirdars	Miners.	Loaders	Skilled Labour	Un- skilled Labour	Females	Clerical and super- vising staff.	Skilled Labour.	Un- skilled Labour.	Females.
48	46	46	48	48	46	51	50	49	49
49	48	46	47	47	48	52	50	49	49
54	54	..	48	.	61	49	48	48	47
53	54	53	53	83	53	81	51	51	51
48	48	..	52	52	..	47	46	48	48
.	.	.	.	.	.	48	45	40	..
82	51	49	81	50	51	52	50	50	50
44	43	..	46	46	46	52	48	49	49
42	46	..	46	46	47	47	47	47	47
45	46	.	47	44	45	49	46	43	44
49	48	..	48	48	47	40	48	48	48
48	48	..	48	48	48	48	48	48	48
84	..	.	..	84	..	52	45	49	..
44	41	..	45	42	42	44	45	45	42
43	42	..	43	43	..	48	48	48	..

Table

Analysis of figures relating to

PROVINCE	Coalfield	COAL.					
		Opening stock	Risings	Total	Despatches	Colliery consumption	Coal delivered for coking
		Tons	Tons	Tons	Tons	Tons	Tons
Assam	Khasi and Jaintia Hills	1,637	10,126	11,763	11,643	..	..
	Makum		238,102	238,102	225,533	10,890	1,639
	Navira . .	166	26,300	26,466	25,675	448	.
Baluchistan	Baluchistan	946	16,213	17,159	15,904	799	.
Bengal and part of Bihar	Raniganj	454,760	8,542,500	8,997,266	7,833,830	518,602	47,305
Bihar	Jharia	1,526,461	10,529,150	12,055,620	8,230,397	772,870	1,364,443
	Bokaro .	11,101	1,983,564	1,994,665	1,028,331	48,881	12,327
	Karanpura .	41,419	566,895	608,304	542,852	21,774	.
	Giridih .	10,593	605,879	706,477	675,329	29,193	.
	Jamtly .	6,114	41,358	47,472	35,956	7,216	..
	Daltonganj .	163	17,090	17,253	2,262	1,854	..
Central Provinces.	Betul .	187	3,794	3,981	1,326	2,095	.
	Pench Valley .	25,804	1,415,562	1,441,366	1,340,093	75,559	..
	Wardha Valley	3,619	291,639	295,258	271,363	16,575	.
	Yeotmal	2	31,836	31,838	25,730	5,076	..
N.-W. P. Provinces.	Hazara .		8	8	5	..	..
Orissa .	Hingir Rampur	2,720	58,687	61,407	54,007	3,779	..
Punjab .	Salt Range .	6,635	194,080	200,715	180,764	4,605	..
	Total 1939 .	2,092,337	24,662,789	26,755,125	21,431,920	1,519,400	1,425,854

DIX I—contd.

No. 3.

the output of coal and coke, 1939.

		COKE									
Coal despatched to coke factories.	Closing stocks.	Opening stock		Coke made		Despatches		Coke consumption		Closing stocks.	
		Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft	Hard	Soft
Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
..	120			.		.	.	.	..	..	..
.	313		..	355		331	..	24			..
		
	456							.			..
	577,449	205	379	880	31,190	691	20,773	85	436	19	1,360
1,594,850	1,687,010	6,552	20,197	105,844	861,445	96,655	835,015	793	6,112	14,048	10,595
233	7,126	700	1	3,663	3,323	4,235	3,294	17	80	111	..
..	43,678		..			..	.	..	..	..	..
46,967	1,450		..		..	.	..	..	..	..	..
.	4,300			.		..	..	..	..	..	..
.	13,142		..		.	..	.	.	..	..	..
..	560	.	.	.	..	..	..	..	..	..	.
..	24,615	.	..	..	.	..	..	..	..	..	..
	7,320	.	..	..	..	..	.	..	..	..	..
.	152	.	.	..	..	..	..	..	..	..	..
.	3		..	..	.	.	..	..	..	..	..
.	2,721	.	..	..	..	..	..	..	..	..	..
..	6,356	.	..	..	..	..	..	..	..	..	..
1,630,976	2,377,681	9,457	20,557	110,742	895,958	101,202	836,962	919	6,573	15,078	20,955

Table

Analysis of figures relating to

PROVINCE	Coalfield	COAL					
		Opening stock	Raisings	Total	Despatches	Colliery consumption	Coal delivered for coking
		Tons	Tons	Tons	Tons	Tons	Tons
Assam	Khasi and Jaintia Hills	1,637	10,126	11,763	11,643		.
	Makum		238,102	238,102	225,533	10,850	1,689
	Nazira	160	26,300	26,466	25,675	443	
Baluchistan	Baluchistan	946	16,213	17,159	15,904	790	.
Bengal and part of Bihar	Rangun	454,760	8,542,506	8,997,266	7,853,530	518,892	47,395
Bihar	Jharia	1,526,461	10,529,159	12,055,620	8,230,397	772,870	1,364,443
	Bokaro	11,101	1,983,564	1,994,665	1,928,331	46,861	12,827
	Karanpura	41,419	566,885	608,304	542,852	21,774	..
	Girdih	10,598	695,879	706,477	675,829	29,198	..
	Jainty	6,114	41,358	47,472	35,956	7,218	.
	Daltonganj	168	17,090	17,258	2,262	1,654	..
Central Provinces.	Betul	187	3,794	3,981	1,326	2,005	..
	Pench Valley	25,804	1,415,562	1,441,366	1,340,993	75,558	..
	Wardha Valley	3,619	291,639	295,258	271,363	16,575	..
	Yeotmal	2	31,636	31,638	25,730	5,076	..
N.-W. F. Provinces	Hazra		8	8	5	..	..
Orissa	Hingir Rampur	2,720	58,687	61,407	54,907	3,779	..
Punjab	Salt Range	6,635	194,040	200,715	189,754	4,605	..
	Total 1919	2,092,337	24,662,788	26,755,125	21,471,990	1,519,400	1,425,854

DIX I—contd.

No. 3.

the output of coal and coke, 1939.

COKE.											
Coal despatched to coke factories.	Closing stocks.	Opening stock		Coke made		Despatches.		Colliery consumption		Closing stocks.	
		Hard	Soft	Hard	Soft.	Hard.	Soft	Hard	Soft	Hard	Soft.
Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons.
	120			.		.	..	.	..	..	..
.	343		..	355		331	..	24	..	..	..
	430							.	.	.	..
	577,449	205	379	880	31,190	981	20,773	85	436	19	1,360
1,504,656	1,687,010	6,552	20,117	105,844	861,445	99,655	855,915	793	6,112	14,948	19,595
233	7,156	700	1	3,663	3,323	4,235	3,294	17	80	111	..
..	43,678				..	.	..	..	..	..	..
45,087	1,450		.			.	.	..	..	..	..
..	4,300	.	.	.	.	.	.	.	..	..	..
	13,142	.	.	.		..	..	.	..	..	..
..	260		.	..	..	.	..	.	..	..	..
..	24,816	.	..		.	.	..	..	..	..	..
.	7,320	.	..	..	..	..	.	..	..	..	..
..	132	..	..	..	..	.	..	..	.	..	..
..	3	..	..	..	.	.	..	..	..	..	..
.	2,521	..	..	..	..	.	..	..	..	..	..
..	6,556	..	..	..	..	..	..	..	..	..	..
1,639,910	2,377,891	9,457	20,557	110,742	895,958	104,202	889,982	919	6,518	15,079	

APPENDIX I—*contd.*

Table No. 4.

Numbers of mines opened, closed and inspected, during the year 1939.

PROVINCE.	District and Mineral field	Number of mines under the scope of the Act	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
Assam	COAL.							
	Khasi and Jaintia Hills	1	..	1	..	.	1	1
	Lakhimpur—Makum Coalfield	5	5	..	.	..	4	15
	Naga Hills—Nazira Coalfield	1	..	1	..	..	1	4
Baluchistan	Baluchistan Coalfield . .	18	..	18	7	4	12	12
Bengal (and part of Bihar)	Raniganj Coalfield . .	231	157	74	23	29	248	958
Bihar	Jharia Coalfield . .	249	172	77	13	25	260	1,187
	Bokaro Coalfield . .	10	6	6	1	1	5	6
	Karanpura Coalfield . .	6	5	..	..	..	5	6
	Obidih Coalfield . .	6	5	3	..	..	6	27
	Jainty Coalfield . .	6	1	5	..	1	5	10
	Daltonganj Coalfield . .	1	1	..	..	..	1	1
Central Provinces	Betul	1	1	..	..	..	1	1
	Pench Valley Coalfield . .	26	20	6	4	1	22	45
	Wardha Valley . . .	6	6	..	..	..	6	11
	Yestmal	1	1	..	..	..	1	2
N. W. F. Province	Hazara	1	..	1	1	..	..	..
Orissa	Higir Rampur Coalfield . .	2	1	..	1	..	1	1
Punjab	Attock	2	..	2	2	1	..	..
	Rawalpindi	1	..	1	1	..	..	..
	Salt Range Coalfield . .	46	1	43	19	14	25	35

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1939.—*contd.*

PROVINCE.	District and Mineral field	Number of mine under the scope of the Act	NUMBER OF MINES				INSPECTIONS.	
			Worked under me- chanical power	Not worked by mechanical power.	Opened during the year	Closed during the year	Number of mines inspected.	Number of inspec- tions.
COAL— <i>contd.</i>								
Sind . . .	Dadu . . .	..	..	..	..	..	1	1
	Grand Total (Coal) for 1939	619	530	239	72	77	605	2,322
	Grand Total of preceding year	665	368	277	115	112	616	2,546
	Difference .	-46	-6	-38	-43	-35	-13	-224
IRON ORE.								
Bihar . . .	..	9	..	9	1	2	8	11
	Total of preceding year .	8	..	8	2	1	2	8
	Difference .	+1	..	+1	-1	+1	+6	+3
MANGANESE ORE.								
Bihar . . .	Singbhum .	15	..	15	2	..	6	6
Bombay .	North Kanara . . .	3	..	3	..	1	..	..
	Panch Mahals . . .	2	2	..	..	..	1	1
Central Provinces	..	85	2	83	29	14	53	53
Madras . . .	..	8	1	7	2	1	14	14
	Grand Total (Manganese Ore) for 1939	113	5	108	33	16	74	74
	Grand Total of preceding year	126	6	120	30	42	65	67
	Difference .	-13	-1	-12	+3	-26	+19	+17

APPENDIX I.—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

PROVINCE	District and Mineral field	Number of mines under the scope of the Act	NUMBER OF MINES				INSPECTIONS	
			Worked under mechanical power	Not worked by mechanical power	Opened during the year,	Closed during the year,	Number of mines inspected	Number of inspections
	GOLD.							
Bihar . . .		3	.	3	1	1	.	..
	Total of preceding year	3		3	1	1	..	..
	Difference	.		..	..	..	.	..
	CHROMITE ORE.							
Daluchistan . .		39	..	39	..	..	2	3
Bihar		12	..	12	.	1	14	14
	Grand Total (Chromite Ore) for 1939	51	..	51	.	1	16	17
	Grand Total of preceding year	52	.	52	1	..	21	11
	Difference	-1	..	-1	-1	+1	+5	+6
	COPPER ORE.							
Bihar . . .	Mandbhum . . .	..	..	..	.	..	1	1
	Singhbhum . . .	5	4	1	1	..	4	9
Central Provinces .	Jubbulpur . . .	1	..	1	1	1	..	..
	Grand Total (Copper Ore) for 1939	6	4	2	2	1	5	10
	Grand Total of preceding year	5	5	..	..	1	3	5
	Difference	+1	-1	+2	+2	..	+2	+5
	MICA.							
Bengal. . .	....	2	..	2	2	..	..	..
Bihar . . .	....	645	48	597	207	235	176	130

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

PROVINCE	District and Mineral field	Number of mines under the scope of the Act	NUMBER OF MINES				INSPECTIONS	
			Worked under inc. electrical power	Not worked by inc. electrical power	Opened during the year	Closed during the year,	Number of mines inspected	Number of inspections
PUNJA—contd.								
Madras . . .	...	124	18	106	48	35	74	74
Rajputana .		41		41	30	28	14	16
	Grand Total (Mines) for 1939	812	64	748	287	298	264	270
	Grand Total of preceding year	839	40	799	300	254	180	103
	Difference	-27	+24	-61	-13	+41	+104	+105
SALT.								
Punjab .		3	1	2	..	..	4	6
	Total of preceding year	3	1	2	..	..	3	6
	Difference		.	..	..	..	+1	..
MAGNESITE.								
Madras . . .	Salem . . .	3	.	3	..	1	1	1
	Total of preceding year	3	..	3	1	..	2	3
	Difference	..	.	..	-1	+1	-1	-1
STEATITE.								
Bihar .		3	.	3	1	..	2	3
Central Provinces	....	5	..	5	3	..	..	..
Madras . . .	....	1	..	1			1	1

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

PROVINCE.	District and Mineral field.	Number of mines under the scope of the Act	NUMBER OF MINES				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
United Provinces .	STEATITE— <i>contd.</i>							
	....	14	..	14	14	14	12	12
	Grand Total (Steatite) for 1939.	23	..	23	19	14	15	15
	Grand Total of preceding year	19	..	19	7	15	17	18
	Difference .	+4	..	+4	+12	-1	-2	-3
Bihar . . .	SLATE.							
	Monghyr	2	..	2	..	..	1	1
	....	12	..	12	3	1	11	11
	Grand Total (Slate) for 1939	14	..	14	3	1	12	12
	Grand Total of preceding year	14	..	14	1	5	14	14
	Difference .	..	..	..	+2	-4	-2	-2
Bihar . . .	LIMESTONE.							
	....	14	..	14	..	1	16	16
	....	12	1	11	1	2	3	2
	Grand Total (Limestone) for 1939.	30	1	29	1	3	30	31
	Grand Total of preceding year	37	2	35	2	5	25	26
	Difference .	-7	-1	-6	-1	-2	+5	+5
Central Provinces .	....	12	1	11	1	2	3	2
Madras . . .	....	1	..	1	..	..	7	7
Punjab . . .	....	3	..	3	..	..	5	6

APPENDIX 1—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

PROVINCE.	District and Mineral field	Number of mines under the scope of the Act	NUMBER OF MINES				INSPECTIONS.	
			Worked under mechanical power	Not worked by mechanical power	Opened during the year	Closed during the year.	Number of mines inspected	Number of inspections.
STONE.								
Bengal. . . .	. . .	3	..	3	..	..	3	3
Bihar . . . .	. . .	58	.	58	7	5	76	76
Bombay . . . .	. . .	19	3	16	1	2	1	1
Central Provinces .	. . .	3	.	3	..	..	..	..
Delhi , . . . .	... .	5	..	5	1	..	18	13
Madras . . . .	... .	12	1	11	2	1	14	14
Punjab . . . .	.... .	4	..	4	..	..	4	4
Sind . . . . .	.... .	1	..	1	..	..	6	6
United Provinces .	.... .	13	..	15	2	..	29	80
	Grand Total (Stone) for 1939	118	4	114	13	8	144	145
	Grand Total of preceding year	123	2	121	18	11	74	77
	Difference .	-5	+2	-7	-5	-3	+70	+68
SAND STONE.								
Bihar	Shahabad	2	..	2	..	..	3	3
United Provinces .	Banda . . . . .	..	..	..	..	..	2	2
	Grand Total (Sandstone) for 1939.	2	..	2	..	..	5	5
	Grand Total of preceding year	2	..	2	..	..	..	..
	Difference .	..	..	..	..			+5

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1939.—*contd.*

PROVINCE	District and Mineral field	Number of mines under the scope of the Act	NUMBER OF MINES				INSPECTIONS	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected	Number of inspections
FIRE CLAY.								
Bengal. . . .	....	5	..	5	3	2	11	11
Bihar . . . .	....	8	..	8	1	2	2	3
Central Provinces .	....	3	1	2	..	..	..	..
Orissa . . . .	.. .	..	..	..	..	..	1	1
	Grand Total (Fire clay) for 1939	16	1	15	4	4	14	15
	Grand Total of preceding year,	17	1	16	5	5	10	12
	Difference .	-1	..	-1	-1	-1	+4	+4
CHINA CLAY.								
Bihar . . . .	....	9	..	9	2	..	5	5
Central Provinces .	....	1	..	1	..	..	..	..
Delhi . . . .	....	4	..	4	3	2	3	3
Punjab . . . .	....	1	..	1	1	1	..	..
	Grand Total (China clay) for 1939	15	..	15	6	3	8	8
	Grand Total of preceding year	16	..	16	8	7	3	4
	Difference .	-1	..	-1	-2	-4	+5	+4

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

Province	District and Mineral field	Number of mines under the scope of the Act	NUMBER OF MINES				INSPECTIONS.	
			Worked under mechanical power	Not worked by mechanical power	Opened during the year	Closed during the year	Number of mines inspected.	Number of inspections.
Bengal	CLAY							
	Burdwan	2	1	1	..	..	..	..
	Total of preceding year	2	1	1	..	..	3	3
	Difference . . . . .			.	..	..	-3	-3
Madras	BARYTES							
	. . . . .	3	.	3	.	..	4	4
	Total of preceding year	3	.	3	.	..	..	..
	Difference . . . . .		..	.	.	..	+4	+4
Madras	CORUNDUM							
	. . . . .	1	..	1	..	1	..	..
	Total of preceding year	1	.	1	1	..	..	..
	Difference . . . . .	..	..	..	-1	+1	..	..
Madras	ASBESTOS.							
	. . . . .	1	..	1	..	..	1	1
Rajputana . . . . .	. . . . .	1	..	1	1	1	..	..
	Grand Total (Asbestos) for 1939.	2	..	2	1	1	1	1
	Grand Total of preceding year.	1	..	1	..	..	..	..
	Difference	+1	..	+1	+1	+1	+1	+1

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

PROVINCE.	District and Mineral field	Number of mines under the scope of the Act.	NUMBERS OF MINES				INSPECTIONS	
			Worked under mechanical power.	Not worked by mechanical power	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
Central Provinces .	OCHRE.	1	..	1	..	..	..	..
	Total of preceding year .	1	..	1	..	..	..	..
	Difference .	..	..	..	..	..	..	..
Madras . . .	GYPSUM.	6	..	5	3	..	..	..
	Total of preceding year .	2	..	2	..	..	..	..
	Difference .	+3	..	+3	+3	..	..	..
Rajputana . .	BERYL.	1	.	1	..	..	..	..
	Total of preceding year .	2		2	..	1	..	..
	Difference .	-1	..	-1	..	-1	..	..
Central Provinces .	GRAPHITE	1	.	1	1	2	..	..
	Madras . . .	1	..	1	..	..	..	..
	Grand Total (Graphite) for 1939	2	.	2	1	1	..	..
..	Grand Total of preceding year	2	..	2	1	1	..	..
	Difference .	..	.	..	..	..	..	..

APPENDIX I—*contd.*Table No. 4—*contd.*Numbers of mines opened, closed and inspected, during the year 1939—*contd.*

PROVINCE.	District and Mineral field	Number of mines under the scope of the Act	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power	Not worked by mechanical power	Opened during the year.	Closed during the year	Number of mines inspected	Number of inspections.
Bombay	DAUNITE.							
	. . . . .	1	..	1	.	.	..	..
Central Provinces	. . . . .	2	.	2	..	..	..	..
	Grand Total (Daunite) for 1939	3	..	3	..	..	..	..
	Grand Total of preceding year	3	..	3	..	..	..	..
	Difference	..		.	..	..	..	..
Rajputana	FELSPAR.							
	. . . . .	3	..	3	1	1	..	..
	Total of preceding year	2	..	2	..	..	2	2
	Difference	+1	..	+1	+1	+1	-2	-2
Bihar	KYANITE							
	. . . . .	1	..	1	..	..	..	..
Madras . . . . .	. . . . .	1	.	1	1	1	..	..
	Grand Total (Kyanite) for 1939	2	.	2	1	1	..	..
	Grand Total of preceding year	1	..	1	..	..	..	..
	Difference	+1	.	+1	+1	+1	..	.

APPENDIX I—*contd.*Table No. 4—*concl'd.*Numbers of mines opened, closed and inspected, during the year 1939—*concl'd.*

PROVINCE.	District and Mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.				INSPECTIONS.	
			Worked under mechanical power.	Not worked by mechanical power.	Opened during the year.	Closed during the year.	Number of mines inspected.	Number of inspections.
Madras	GARNET.							
	. . . . .	1	.	1	..	1	..	..
	Total of preceding year .	..	..	..	..	..	..	..
	Difference .	+1	..	+1	..	+1	..	..
Bombay	ORAVEL							
	. . . . .	1	..	1	..	.	..	..
	Total of preceding year .	..	..	..	..	..	..	..
	Difference .	+1	..	+1	..	..	.	..
	Grand Total (Metalliferous Mines) for 1939	1,245	81	1,164	377	354	605	625
	Grand Total of preceding year.	1,288	53	1,330	378	349	390	411
	Difference .	-43	+28	-66	-1	+5	+215	+214
	Grand Total (All Minerals) for 1939.	1,864	461	1,403	449	431	1,210	2,947
	Grand Total of preceding year.	1,953	445	1,507	493	461	1,008	2,957
	Difference .	-89	+16	-104	-44	30	+202	-10

APPENDIX I—*contd.*

Table No. 5.

The following table shows the fluctuation in the output of the principal minerals raised from mines classed under the Indian Mines Act. The other minerals raised are apatite, asbestos, harytes, bauxite, beryl, chinaclay, clay, corundum, felspar, fireclay, fuller's earth, garnet, graphite, gypsum, kyanite, magnesite, ochre, slate, stone and steatite.—

Year.	Coal.	Manga- nese ore	Mica	Lime- stone	Salt	Gold	Copper ore	Wol- fram ore.	Iron ore	Chro- mite ore.	Tin ore	Lead ore.	Silv
	Tons.	Tons	Cwts	Tons	Tons.	Troy ozs	Tons	Tons	Tons.	Tons.	Tons.	Tons	Troy o
1930	22,683,861	623,618	52,319	1,143,312	147,276	30	123,749	1,500	1,132,803	30,488	6,001	530,119	7,054,2
1931	20,514,597	347,373	46,177	862,236	134,916	.	153,636	969	590,176	14,938	2,552	297,679	5,900,
1932	16,719,587	88,119	32,643	725,378	150,266	50	175,375	648	673,431	7,866	2,057	372,586	5,908,
1933	18,160,681	53,240	41,005	1,120,110	145,838	267	201,722	836	653,239	9,770	8,209	454,791	5,054,
1934	20,243,977	231,282	55,355	940,860	154,935	858	328,676	1,333	831,477	9,356	3,890	443,489	5,792,
1935	21,014,469	422,847	58,553	1,000,308	150,515	1,255	350,801	2,549	1,179,060	19,039	4,383	460,888	5,825,
1936	20,583,982	624,630	82,077	1,007,957	151,523	1,376	357,194	8,140	1,401,530	28,142	4,664	468,842	5,952,
1937	22,635,529	800,260	94,811	1,318,598	163,813	26	371,458	.	1,637,362	35,697	.	.	.
1938	25,276,743	766,341	101,693	1,562,059	164,674	16	288,076	.	1,421,000	27,086	.	.	.
1939	24,662,768	669,020	104,375	1,515,690	166,950	..	360,213	.	1,543,034	18,428	.	.	.

*The production in previous years was from Burma

Table No. 6.

The following table shows the amount of coal raised, the average number of persons working daily and the death-rates during the years 1930-1939 in respect of coal mines under the Indian Mines Act:—

Year.	Amount of coal raised.	Average number of persons work- ing daily below and above ground	Number of deaths below and above ground.	Death-rates	
				Per 1,000,000 tons raised.	Per 1,000 per- sons working daily below and above ground.
1930	22,683,861	169,001	211	30	1.25
1931	20,514,597	158,267	185	9.02	1.17
1932	16,719,587	148,469	151	8.07	1.02
1933	18,160,681	144,707	124	6.83	0.66
1934	20,243,977	151,375	157	7.76	1.04
1935	21,014,469	159,254	264	12.56	1.66
1936	20,583,982	162,917	420	20.40	2.58
1937	22,635,529	171,149	209	8.95	1.17
1938	25,276,743	201,093	243	9.61	1.23
1939	24,662,768	201,959	242	11.76	1.23

APPENDIX I—contd.

Table No. 7.

Aggregate horse power and purpose for use of electric motors installed both on surface and underground at coal mines under the Indian Mines Act.

Coalfield.	Horse power on surface.					Total.	Horse power below ground.					Total horse power of motors installed.
	Winding.	Ventilation.	Haulage.	Coal washing or screening.	Miscellaneous.		Haulage.	Pumping.	Portable machinery.	Miscellaneous.	Total.	
Assam . . . . .	..	117	125	7	263	512	180	..	..	..	180	692
Bokaro	200	195	520	85	1,421	2,421	510	766	100	35	1,311	3,682
Central Provinces and Berar.		135	100	23	207	465	230	1,202	352	90	2,015	2,430
Orissa	263	338	..	270	448	1,271	779	4,659	180	2	5,630	6,901
Jharia	3,683	1,385	2,349	1,310	2,350	10,432	9,672	26,551	3,223	1,832	41,278	51,709
Karampura . . . . .	..	75	785	95	352	1,307	95	419	100	..	614	1,921
Punjab . . . . .	..	..	125	..	21	146	..	..	..	..	..	146
Raniganj	2,410	2,057	762	1,134	1,856	8,219	8,750	13,771	5,357	511	28,219	36,438
TOTAL	5,863	4,332	4,786	2,926	6,918	24,621	20,205	47,398	9,502	2,270	79,175	104,000

Table No. 8.

Number of mines under the Indian Mines Act, where electric power is used and the aggregate horse power of electric motors installed.

Minerals worked.					Total horse power of motors installed
Province.	Coal.		Sundry Minerals		
	Number of mines.	Horse power.	Number of mines	Horse power.	
Assam	2	692	..	..	692
Bengal	55	31,073	1	59	31,071
Bihar	78	69,669	10	4,792	74,461
Bombay . . . . .	..	..	1	206	206
Central Provinces and Berar . .	10	2,430	4	573	3,053
Madras . . . . .	..	..	4	629	629
Punjab	1	146	2	1,849	1,995
Total	146	104,000	22	8,107	112,107

APPENDIX I—*contd.*

Table No. 9.

Number and type of coal-cutting machines at work during 1939 in Coal Mines under the Indian Mines Act.

Type of machines.	Power.		Total number of machines.
	A C.	D C.	
Chain	147	12	159
Bar	33	1	34
Percussive	10	..	10
Total	190	13	203

Jharis Coalfield	58 machines	} Total number of square feet undercut—10,816,032.
Raniganj coalfield	130 "	
Giridih Coalfield	1 "	
Karsanpur Coalfield	2 "	
Bokaro Coalfield	2 "	
Central Provinces Coalfield	12 "	

Table No. 10.

Number of mechanical ventilators in use during 1939 at Coal Mines under the Indian Mines Act.

Assam.	Baluchistan	Bengal.	Bihar.	Central Provinces.	Orissa.	Punjab.	Total.
9	.	47	70	11	..	2	139

APPENDIX I—contd.

Table No. 11.

Safety lamps in use during 1939 at Coal Mines under the Indian Mines Act.

Name of Manufacturer	Number in use in							Total.
	Assam.	Baluchistan.	Bengal.	Bihar.	Central Provinces	Orissa.	Punjab.	
			ELECTRIC.					
Ceag	385	..	908	2,521	..	..	..	3,814
Concordia . .	..	..	2,755	1,389	..	..	..	4,144
			FLAME TYPE.					
Davies	280	..	5,722	5,903	8	..	6	11,919
Hallwood . . .	2,211	..	2,137	11,243	..	..	..	14,591
Naylor . . . .	..	..	1	224	..	..	..	225
Patterson . . .	..	..	92	908	..	..	..	1,000
Premier . . . .	..	..	1	903	..	..	..	904
Thomas Williams	..	..	6,287	4,090	..	..	..	10,977
Wolfe . . . .	..	6	..	..	..	..	..	6
Total	1,876	6	17,963	27,781	8	..	6	47,640

9,606 were locked by lead rivets and 37,634 by magnetic means

Table No. 12.

Statement of explosives used during 1939 at Mines under the Indian Mines Act.

Name of explosives.	Quantity of explosives used, in lb., in						Total
	Coal mines	Mica mines	Manganese mines	Limestone mines	Stone mines.	Other mines	
Dynamite	3,351	39,108	26,301	10	2,408	..	71,178
Gelatine	28	3,725	15,527	1,270	..	554	21,104
Gallignite	77,960	252,105	67,174	1,516	2,546	441,963	843,264
Monobel . . . .	..	..	250	4,905	..	..	5,155
Monobel A-2 . . .	34,107	..	..	..	..	..	34,107
Stonobel	195,680	..	..	..	..	..	195,680
Dynobel	583	..	..	..	..	..	583
Raunkol	30,028	..	..	..	..	..	30,028
Liquid Oxygen . .	79,869	..	..	..	..	..	79,869
Gunpowder	3,500,376	14,958	155,472	342,898	193,163	406,846	4,613,711
Picric Powder . . .	..	..	..	..	454	..	454
Number of detonators used . .	1,088,676	5,254,896	608,084	6,483	32,495	706,122	4,696,723

APPENDIX II.
Accidents in Mines.

APPENDIX II.

ACCIDENTS IN MINES.

Table No. 1.

Fatal Accidents during the year 1939.

Serial Number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES.						
(c) Falls of roof—(95 deaths).						
1	5th January, 2 P.M.	Chittidand mine, Golpur P. O., Punjab.	National Coal Co. Ltd.	Paral, (m.), 30, Loader.	Coal.	While removing debris which had been dressed from the roof of a gateway, deceased was killed by a mass of shale which fell from the roof at a height of 4 feet. Inspection and inquiry made.
2	5th January, 4 P.M.	South East Baraboni mine, Charanpur P. O., Bengal.	Maharaja S. C. Nandy.	Topeahwar Chaman, (m.), 30, Shot-firer.	Coal.	While deceased was dressing down roof coal, which had been loosened by a shot, a mass of coal, 3'x1'x1', fell prematurely from a height of 9 feet. Deceased lost his balance, fell on the floor and was caught by the fall. He sustained injuries which proved fatal three days later. Inspection and inquiry made.
3	7th January, 6 45 A.M.	Seetalpur mine, Dahergarh P. O., Bengal.	Bengal Coal Co. Ltd.	Anup Majhi, (m.), 60, Coal-cutter.	Coal.	While a miner was filling a basket with coal in a depillaring area a mass of roof shale, 6'x5'x3', fell from a height of 9 1/2 feet due to weighting. He was struck by the falling shale and fatally injured. Inspection and inquiry made.
4	8th January, 4 A.M.	Chittidand mine.	National Coal Co. Ltd.	Palla, (m.), 25; Gol, (m.), 20, Coal-cutters.	Coal.	While working on a longwall face the deceased were killed by a mass of shale, 4'x3'x2', which fell from between two "ships" in the roof at a height of 2 feet. Inspection and inquiry made.

5	9th January, 11-20 A.M.	Serampur mine, Girdih P. O., Bihar.	State Railways' Coal Department	Dewki Chamar, (m.), 35; Amrit Doud, (m.), 37, Coal cutters	Coal	A number of miners was at work in a depillaring area when a violent "bump" occurred and dislodged a mass of roof stone, 16' x 11' x 5'. Two persons who were working near the edge of the fall were killed instantly and another person was seriously injured. Inspection and inquiry made.
6	9th January, 7 P.M.	Khewra mine, Khewra P. G., Punjab.	Government India.	Mohd. Khan, (m.), 25, Labourer	Rock salt.	While engaged in preparing a place for erecting supports in an underground tunnel, deceased was killed by a mass of rock, weighing 7 tons, which fell off the roof at a height of 8 feet. Inspection and inquiry made.
7	16th January, 2-30 P. M.	Bhulanbarat mine, Pathardih P. O., Bihar.	Bhulanbarat Coal Co., Ltd.	Bonowari Chatwar, (m.), 30, Labourer	Coal	Deceased was sitting down in a gallery, when a mass of roof coal, 2' x 1' x 6" thick, fell on him from between two "cleats" at a height of 10 feet. He sustained serious injuries to which he succumbed three weeks later. Inspection and inquiry made.
8	17th January, 5-41 A. M.	Jamuna mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Budhan Dhoi, (m.), 18, Coal-cutter	Coal	Deceased was returning to his working place in a depillaring area after blasting, when due to "weighting" in an adjoining goaf a mass of roof stone, 20' x 10' x 2', fell, dislodging several props, one of which struck deceased on the head, killing him on the spot. Inspection and inquiry made.
9	14th January, 4-30 A. M.	Beldih mine, Sunderchak P. O., Bengal	Equitable Coal Co., Ltd.	Ram Prosad Jat, (m.), 26, Coal-cutter.	Coal	While deceased was loading coal in a gallery, 13½ feet high, a mass of coal, weighing about 15 cwt., fell from a concealed "slip" in the roof. He was struck and killed instantly. Inspection and inquiry made.
10	18th January, 7 P. M.	Rajur mine, Rajur P. O., Central Provinces	Ballarpur Collieries Company	Anada Linga Asba, (m.), 20, Labourer.	Coal	While engaged in loading coal in a level gallery, deceased was fatally injured by a piece of shale, 3' x 2' x 8", which fell from between two "slips" in the roof from a height of 5½ feet. Inspection and inquiry made.
11	24th January, 6-30 A. M.	Jainty Central mine, Karmatar P. O., Bihar.	Jainty Central Colliery Ltd.	Chamru Meah, (m.), 45, Coal-cutter.	Coal	Deceased left his appointed working place and was cutting coal from the side of a pillar, when a mass of roof stone, 45' x 6' x 2', fell on him from a height of 4½ feet killing him instantly. Inspection and inquiry made.
12	8th February, 1-30 P. M.	Mugwa mine, Domchanch P. O., Bihar.	Christian Mining Co., Ltd.	Budhon Gope, (m.), 27, Driller.	Iron	While two drillers were engaged in drilling a hole in the roof of a gallery 6 feet high, a mass of rock, 3' x 2' x 1', fell from the roof and fatally injured one of them. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1939—contd.

Serial number	Date and hour of accident	Name, and situation of mine	Name of owner.	Name, sex, age and occupation of person killed	Name of mineral worked	Cause of accident and remarks.
(a) Falls of roof—contd.						
13	8th February, 12-15 P.M.	Darnondia mine, Sitarampur P. O., Bengal.	New Berthoom Coal Co., Ltd.	Baul Bauri, (m.), 58, Stone cleaner.	Coal	A gang of persons was engaged in cleaning up an old fall in a gallery when a thin piece of roof shale, about 8'x3'x1½", fell from a height of 7 feet inflicting fatal injuries on one and serious injuries on another. Inspection and inquiry made.
14	14th February, 1-30 P.M.	Seobpur mine, Charanpur P. O., Bengal.	Katra's Jheriah Cold Co., Ltd.	Bhawan Gararia, (m.), 40, Cool-cutter.	Coal	While a miner was dressing down roof coal which had been loosened by a shot, a mass of coal, 6'x4'x6", fell from a height of 16 feet. Deceased was struck and fatally injured. Inspection and inquiry made.
15	4th March, 4 A.M.	Parbela mine, Necturia P. O., Bihar.	Bengal Coal Co., Ltd.	Sahasram Routh, (m.), 51, Loader.	Coal	While deceased was loading coal which had been blasted from the roof of a gallery he was fatally injured by a mass of coal, 6'x5'x6", which fell upon him from a height of 7½ feet. Inspection and inquiry made.
16	5th March, 1-30 A.M.	Lakurka mine, Katragarh P. O., Bihar.	Lakurka Coal Co., Ltd.	Jadn Majhi, (m.), 30, Loader.	Coal	While a loader was filling a basket with coal in a gallery, a mass of shale, 7'x1'6" x 1', fell from a concealed "slip" in the roof from a height of 8 feet and killed him instantly. Inspection and inquiry made.
17	10th March, 9 P.M.	Standard (Jharia Khas Section) mine, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Ramdas Chamar, (m.), 22, Ramabatar Chamar, (m.), 20, Cool-cutter.	Coal	While two miners were at work in a gallery, a mass of stone, 12'x9'x1', fell from the roof from a height of 9 feet and killed them instantly. The fall was due to a concealed "slip" parallel to the rise side of the gallery. Inspection and inquiry made.

18	12th March, 2 P.M.	Kajora mine, Kojragram P. O., Bengal	Roy Dutta & Co.	Atawari Roy, (m.), 32, Timberman.	Coal	A timberman and his two assistants were withdrawing props from a depillaring area, under the supervision of an overman when there were indications of "weighting" in the goaf. Deceased, while attempting to reach a place of safety, entered the open space from where props had been withdrawn, and was struck by a mass of roof coal, 2' 6" x 2' x 1', which fell from a height of 14 feet. He received serious injuries which proved fatal a few hours later. Inspection and inquiry made.
19	17th March, 11-15 P.M.	Jitpur mine, Bhaga P. O., Bihar	Indian Iron and Steel Co., Ltd.	Sadharam Dholi, (m.), 50, Coal-cutter.	Coal	While deceased was engaged in reducing a stock which had been holed through to a goaf, a piece of roof coal, 3' x 3' x 1' 6", fell from inside the goaf and fatally injured him. Inspection and inquiry made.
20	14th March, 2 P.M.	Kustore mine, Kusunda P. O., Bihar.	Ranveerjee Coal Association, Ltd.	Joyram Teli, (m.), 35, Coal-cutter.	Coal	Deceased was killed by a mass of stone, 10' x 9' x 2', which fell without warning from the two converging "ships" in the roof at a height of 10 feet. Inspection and inquiry made.
21	20th March, 8 P.M.	Katra-Chaitodih mine, Katra-garh P. O., Bihar.	Burrakur Coal Co., Ltd.	Genu Gope, (m.), 45, Coal-cutter.	Coal	Deceased was struck by a piece of stone, 3' x 2' x 3', which fell from the roof at a height of 8 feet. He received injuries which proved fatal two hours later. Inspection and inquiry made.
22	21st March, 4-30 A.M.	Sodepur (Nos. 9 and 10 pits) mine, Sunderbhab P. O., Bengal.	Bengal Coal Co., Ltd.	Bhota Majhi, (m.), 50, Coal-cutter.	Coal	Deceased was loading coal which had been dressed from the roof of a gallery, 12 feet high, when a mass of roof coal, 8' x 4' x 2' 6", fell on him from between two concealed "ships". He sustained serious injuries to which he succumbed three and a half hours later. Inspection and inquiry made.
	1th April, 5-15 P.M.	Dhageband mine, Jharra P. O., Bihar.	Borra Coal Co., Ltd.	Budhan Gope, (m.), 40, Timberman.	Coal	While props were being withdrawn from a depillaring area, a "stock" collapsed and a mass of roof stone, 4' x 3' x 1', fell on deceased from a height of 9 feet. He sustained injuries which proved fatal 8 hours later. Inspection and inquiry made.
24	10th April, 3 P.M.	Kustore mine, Kusunda P. O., Bihar.	Raniganj Coal Association, Ltd.	Budhan Rout, (m.), 35, Coal-cutter.	Coal	While coal was being loaded in a depillaring area in a seam, 12 feet thick, a mass of coal, 5' x 4' x 4', fell from the edge of a "catch" of roof coal. A miner was struck and fatally injured and a loader was seriously injured. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

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Serial number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—<i>contd.</i>						
(a) Falls of roof—<i>contd.</i>						
25	14th April, 7-35 A.M.	Hindusthan Lalpyth mine, Chanda P. O., Central Provinces	Birla Brothers, Ltd.	Narainbhai, (m.), 25, Loader.	Coal	While a gang of ten loaders was engaged in loading coal, blasted from the side of a pillar, a mass of coal, 6'4" x 9' fell from the roof from a height of 10 feet. Deceased sustained serious injuries to which he succumbed two days later and another loader was seriously injured. Inspection and inquiry made.
26	16th April, 8-30 P.M.	Loyabad mine, Bansjora P. O., Bihar.	Burrakur Coal Co., Ltd.	Dhbar Patha, (m.), 36, Labourer.	Coal	While a timberman and four labourers were setting cross-bars on a haulage road, under bad roof, a mass of stone, 10' x 6' x 26", fell from the roof and dislodged three temporary props which had been set under it. Deceased was killed instantly and another labourer was seriously injured. Inspection and inquiry made.
27	19th April, 11-30 A.M.	Dabergarh West mine, Dabergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Bagari Majhi, (m.), 32, Coal-cutter.	Coal	While dressing roof coal in a depillaring area, deceased dislodged a mass of coal, measuring about 8' x 3' x 3', which fell on him from a height of 7 feet, killing him on the spot. Inspection and inquiry made.
28	22nd April, 6 A.M.	Lodna (Nos. 4 and 5-Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Gulzar Meah, (m.), 35, Loader.	Coal	Deceased was loading coal blasted from the roof of a gallery, 20 feet high, when a mass of roof coal, 10' x 5' x 2', fell on him from between two concealed "slabs". He was killed instantly. Inspection and inquiry made.
29	25th April, 5 A.M.	Parasur mine, Chordia P. O., Santhal Parganas.	B. Mukherjee & Co.	Upendra Mechi, (m.), 35, Coal-cutter.	Coal	While deceased was at work in a depillaring area, a mass of roof stone, 24' x 8' x 3', fell from between two "slabs" at a height of 9 feet, killing him instantly. Inspection and inquiry made.
31	27th April, 10-30 P.M.	Methan mine, Sitarampur P. O., Bengal.	Aldah Coal Co., Ltd.	Tribhuan Koke, (m.), 45, Coal-cutter.	Coal	Deceased was struck and fatally injured by a mass of coal, weighing about 1 cwt., which fell from the roof at a height of 11 feet. Inspection and inquiry made.

31	29th April, 9 P.M.	Standard mine, (Jharia Khas Section). Jharia P.O., Bihar	Standard Coal Co., Ltd.	Bhiman Gowah, (m), 20, Coal-cutter	Coal	Deceased and his companion were engaged in erecting a ladder to dress down loose coal after blasting in a gallery when a mass of roof coal, $5' \times 4' \times 1'6''$, suddenly fell on him from a height of 20 feet. He succumbed to his injuries fifteen minutes later. Inspection and inquiry made.
32	28th April, 2 P.M.	Jamunia mine, Sitarampur P.O., Bengal	Equitable Coal Co., Ltd.	Muruli Baghi, (m), 45, Coal-cutter.	Coal	Deceased was working at the back of a gallery, 12 feet high, by standing on a stool, when a mass of coal fell and upset it. He fell a distance of 5 feet and received injuries which proved fatal 37 hours later. Inspection and inquiry made.
33	29th April, 4 A.M.	Mithani mine, Sitarampur P.O., Bengal	Albini Coal Co., Ltd.	Jahru Mahanta, (m), 32, Coal-cutter.	Coal	Deceased left his appointed working place and went through a fence to rob coal from the side of a pillar. A mass of roof shale, $10' \times 1'6'' \times 1'$, fell on him from a height of 13 feet, killing him instantly. Inspection and inquiry made.
34	8th May, 1-30 P.M.	Bhamori mine, Parasia P.O., Central Provinces	Amalgamated Coal fields, Ltd.	Jodha Mochi, (m), 30, Coal cutter.	Coal	While a miner was shovelling blasted coal in a gallery, he was struck by a mass of stone, $3'6'' \times 2' \times 1'6''$, which fell from between two converging "slips" in the roof, at a height of 7 feet. He sustained injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
35	11th May, 12 noon.	Dalla mine, Jumuneco P.O., Central Provinces	Amalgamated Coal fields, Ltd.	Sarpoo Brahmin, (m), 37; Chhotelal Dhamar, (m), 42, Coal-cutters,	Coal	While the two deceased were resting in a gallery, 7 feet high, a mass of stone, $10' \times 5' \times 9''$, fell from a "slip" in the roof and killed them instantly. If the place had been properly inspected after blasting, the accident would have been avoided. Inspection and inquiry made.
36	17th May, - 15 A.M.	Sijua mine, Sijua P.O., Bihar.	Tata Iron & Steel Co., Ltd.	Balewar Singh, (m), 32, Labourer.	Coal	While making a hole in the side of a pillar for erecting a cross-bar in a gallery, deceased was killed by a mass of roof coal, $6'6'' \times 4'6'' \times 1'6''$, which fell off a concealed "slip" at a height of 7 feet. Inspection and inquiry made.
37	17th May, 3 P.M.	Mallahel mine, Ting P.O., Punjab.	Cheoni Lal Kapor.	Jasat Mir, (m), 25, Coal-cutter.	Coal	While working in a narrow heading deceased was fatally injured by a mass of shale, $2'6'' \times 1'6'' \times 6''$ which fell off the roof at a height of 6 feet. Inspection and inquiry made.
38	19th May, 5 P.M.	Dhemo Main mine, Sitarampur P.O., Bengal.	Dhemo Main Colli- eries, Ltd.	Etwari Chamar, (m), 36, Coal-cutter.	Coal	Deceased was working in a gallery being driven in a pillar under extraction when a "bump" occurred, causing a mass of roof stone, $10' \times 9' \times 3'$, to fall from a height of 13 feet. He was caught by the fall and killed instantly. Inspection and inquiry made.

APPENDIX II—*contd.*Fatal Accidents during the year 1939—*contd.*

Serial number.	Date and hours of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remark.
FALLS OF ROOF AND SIDES—<i>contd.</i>						
(a) Falls of roof—<i>contd.</i>						
33	31st May, 8 P.M.	Methal mine, Sitarampur P. O., Bengal.	Aldah Coal Co., Ltd.	Bhadu Singh, (m.), 37, Coal-cutter.	Coal	Deceased was dressing down loose roof coal in a gallery, 10 feet high, when he accidentally struck a prop, causing a small piece of roof coal to fall on his head. He sustained injuries, which proved fatal 28 hours later. Inspection and inquiry made.
40	2nd June, 7 A.M.	Beldhi mine, Sunderbhat P. O., Bengal.	Equitable Coal Co., Ltd.	Moogal Kumar, (m.), 35; Huro Kumar, (m.), 34, Coal-cutter.	Coal	While a gang of five miners was walking along a level gallery at the end of their relay there was a sudden "bump", causing a fall of several tons of roof coal. One of them was killed on the spot and another succumbed to his injuries before he could be extricated. Inspection and inquiry made.
41	7th June, 2 30 A.M.	Bankamula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Sim Shaw Turu, (m.), 36, Labourer.	Coal	A mass of roof coal, 8' x 3' x 1', fell from the edge of a goaf, dislodging a prop, 14 feet long, which struck deceased killing him instantly. Inspection and inquiry made.
42	9th June, 2 30 A.M.	Alkusa North mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Sannu Meah, (m.), 45, Loader.	Coal	While coal was being loaded in a depillaring area a mass of roof coal, 4' x 4' x 1'6", fell from a height of 18 feet on to one of the loaders and killed him instantly. If the roof had been properly tested after the firing of shots the accident would not have occurred. Inspection and inquiry made.
43	15th June, 4 30 A.M.	Sripur (Nos 1, 2 & 3, Fites) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Sahai Chamar, (m.), 39, Coal-cutter.	Coal	While deceased was dressing coal from the side of a "stook" in a depillaring area, a mass of coal, 5' x 4' x 2' 6", fell from the roof, from a height of 8 feet. He was struck and fatally injured. Inspection and inquiry made.

44	15th June, 2 A.M.	Dhori mine, Bokaro P. O., Bihar.	Bokaro and Ram- garh Ltd.	Saku Majhi, (m), 30, Coal-cutter.	Coal	While deceased was loading fallen coal from the edge of an old goaf, a mass of coal 3' x 2' 3" x 2' 6" thick rolled down and struck him. He received serious injuries to which he succum- bed three hours later. Inspection and inquiry made.
45	16th June, 6 A.M.	Digwardh mine, Jalgora P. O., Bihar	Tara Iron & Steel Co., Ltd.	Dukhan Bhuiya, (m), 65, Coal-cutter.	Coal	While working in a gallery, deceased was fatally injured by a triangular mass of coal, 12' long, 3' to 6' wide and 1' to 1' 6" thick, which fell from two concealed "slips" in the roof at a height of about 7 feet. Inspection and inquiry made.
46	27th June, 6.30 P.M.	Victoria mine, Kulti P. O., Bengal	New Beerbloom Coal Co., Ltd.	Suchand Bhandary (m), 50, Sunder	Coal	While a sirdar was supervising the withdrawal of props in a dwellling area, a mass of roof stone 10' x 12' x 1' 6", suddenly fell on him from a height of 6 feet. He was killed instantly. Inspection and inquiry made.
47	29th June, 9.30 P.M.	Purbela mine, Nittura P. O., Bihar.	Bengal Coal Co., Ltd.	Hangsha Kora, (m), 25, Coal cutter	Coal	While deceased was shovelling coal on a conveyor face, he was struck and killed instantly by a mass of coal, 7' x 3' x 1', which fell from a height of 6½ feet. The coal fell from a concealed "slip" and a clean "parting" in the roof. Inspection and inquiry made.
14	29th June, 3.10 P.M.	Baragola mine, Nargheria P. O., Assam.	Assam Railways and Trading Co., Ltd.	Bhakta Bahadur, (m), 26, Coal cutter.	Coal	While putting away his tools at the end of his relay, deceased was struck and seriously injured by a mass of coal, about 5 cwis in weight, which fell from the roof of an "opening" at a height of 5 feet. He contracted Pneumonia from which he died seventeen days later. Inspection and inquiry made.
	1st July, A.M.	Sitalnala mine, Bhojibh P.O., Bihar.	Mohatta Brothers.	Badeshi Mallik, (m), 35, Coal cutter.	Coal	Deceased was pushing an empty tub along a tramming level when the tub got derailed and dislodged a prop which had been set very near the transline. A mass of coal, 1' 8" x 1' 4" x 3" which had been supported on the prop, fell from the roof at a height of 10 feet and struck deceased, resulting in serious injuries which proved fatal some 5½ hours later. Inspection and inquiry made.
50	4th July, 6 P.M.	Ekabara mine, Faridkot P.O., Central Provinces	Amalgamated Coal- fields, Ltd.	Chhotu Katwar, (m), 40, Labourer	Coal	While working at a hand pump in a gallery, 5 feet high, deceased was struck and killed instantly by a mass of stone, 12' x 8' 6" x 10", which fell unexpectedly from the roof. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—<i>contd.</i>					
(a) Falls of roof—<i>contd.</i>					
51 7th July, 8 30 P.M.	Madadhi mine, Sijua P.O., Bihar.	Burrahar Coal Co., Ltd.	Mongra Majhi, (m.), 25, Coal-cutter.	Coal	During the extraction of a pillar of coal in a seam, 9½ feet thick, a miner was standing on a basket cutting down overhanging roof coal at the side of the pillar. While he was levering with his pick he overbalanced and fell to the floor and the coal which he was taking down fell on him, killing him instantly. Inspection and inquiry made.
52 11th July, 4 30 P.M.	Madadhi mine, Sijua P.O., Bihar.	Burrahar Coal Co., Ltd.	Khabli Khan, (m.), 24, Labourer.	Coal	While props were being withdrawn from a depillaring area, by a "Syntreater" prop withdrawer deceased attempted to recover a partially dislodged prop, when he was fatally injured by a mass of coal, 2' x 2' x 1', which suddenly fell from between two "ships" in the roof at a height of 8 feet. Inspection and inquiry made.
53 13th July, 4 A.M.	Dhemo Main mine, Sitarampur P.O., Bengal.	Dhemo Main Coal Co., Ltd.	Rasuli Meah, (m.), 45; Hira Singh, (m.), 38, Coal cutters	Coal	While pushing empty tubs at the entrance to a level haulage road in a depillaring area, deceased was struck and fatally injured by a fall of roof coal weighing about 2 tons, which was dislodged by a "bump", and two other persons received serious injuries, one of whom subsequently died. Inspection and inquiry made.
54 15th July, 4 A.M.	Medhani mine, Sitarampur P.O., Bengal.	Mdahi Coal Co., Ltd.	Jaganmuth Dasai, (m.), 28, Coal-cutter.	Coal	While filling coal at the edge of a goaf in a depillaring area, deceased was struck and killed instantly by a mass of roof stone, measuring 4' x 1' x 6", which fell from a height of 15 feet. Inspection and inquiry made.

55	24th July, 1 A M.	Balighat mine, Bihar, P. O., Central Province	Central Province Manufacture Co., Ltd.	Lookhooam, (m.), 29, Miner	Manganese	While loading stone which had been blasted in a cross-cut driven from a waste, deep coal was struck and killed instantly by a mass of stone, weighing about 14 tons, which fell from the roof at a height of 6 feet. Inspection and inquiry made.
56	24th July, 5 A M.	West Jannara mine, Chauram P. O., Bengal	West Jannara Coal Co., Ltd.	Mahabir Singh, (m.), 40, Coal-carrier	Coal	While deceased was resting in a gallery, a sudden "boom" in a neighbouring goaf caused a mass of roof coal, $4' \times 2' \times 2'$, to fall on him from a height of 5 feet. He sustained serious injuries and died 7 days later. Inspection and inquiry made.
57	25th July, 1.30 P M.	Dharmu Manu mine, Sitaranagar P. O., Bengal	Dharmu Manu Coal Co., Ltd.	Parka Majhi, (m.), 30, Loader	Coal	Deceased passed through a fence and was falling into a coal from a disused gallery when a mass of roof coal, $9' \times 7' \times 1'$, fell on him from a height of 9 feet. He was killed instantly. Inspection and inquiry made.
58	7th August, 1 P M.	Sandira mine, Banspur P. O., Bihar	Sandira Coal Co., Ltd.	Jagoo Rai, (m.), 38, Shot-firer	Coal	While deceased was sitting on a haulage road adjoining a depillaring area, a triangular mass of roof coal, $4'6'' \times 4' \times 7'$, by $30'$ in length fell off a "ship" at a height of 8 feet and killed him on the spot. Inspection and inquiry made.
59	15th August, 6.40 P M.	Shivrajpur mine, Shivrajpur P. O., Bihar	Shivrajpur Syndicate, Ltd.	Samalaya Pintam, (m.), 22, Miner	Manganese	Several persons were employed in a waste filled overland slope, when a mass of ore $7' \times 5' \times 3'$, fell on deceased and killed him instantly. Two other persons were seriously injured. Inspection and inquiry made.
60	15th August, 2.40 P M.	Kusumdia A Nandan mine, Kusumdia P. O., Bihar	Kusumdia A Nandan Collieries Co.	Kartik Rajwar, (m.), 28, Jannu Rajwar, (m.), 35, Santhar Rajwar, (m.), 26, Coal-carriers	Coal	While work was in progress in a depillaring area in a seam 27 feet thick, a triangular mass of roof coal, $23' \times 20' \times 7'$ by $3'$ thick, fell off a "ship" adjacent to the pillar under extraction. Two coal carriers were struck and killed instantly by the falling coal and another coal carrier was seriously injured. He died three months later. Inspection and inquiry made.
61	20th August, 2.15 P M.	Sandira mine, Banspur P. O., Bihar	Sandira Coal Co., Ltd.	Rohini Bhat, (m.), 32, Labourer	Coal	While deceased was acting as a prop in a depillaring area, a mass of coal $6' \times 2' \times 1' 6''$, fell from a "ship" in the roof at a height of about 10 feet and struck him. He sustained serious injuries and died about 3 hours later. Inspection and inquiry made.
62	1st September, 1.30 P M.	Katra Chudashahi mine, Katrassath P. O., Bihar	Burnaker Coal Co., Ltd.	Dost Mohammed, (m.), 26, Coal-carrier	Coal	While a miner was loading coal in a gallery, 10 feet wide and 74 feet high, a mass of stone, $8' \times 4' \times 3' 6''$, fell from the roof. He was struck by the falling stone and killed instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Serial Number	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mine or of place where accident occurred.	Cause of accident and remarks.
FAILS OF ROOF AND SIDES—<i>contd.</i>						
(c) Falls of roof—<i>contd.</i>						
63	7th September. 5 P.M.	Sodepur (No. 9 & 10 Pits) mine, Sunderbark P. O., Bengal.	Bengal Coal Co., Ltd.	Domen Das, (m.), 37, Coal-cutter.	Coal.	A gang of miners was about to commence work in a depillaring area when a mass of roof stones fell from the edge of the coal and knocked out several props, one of which struck deceased and fatally injured him. Inspection and inquiry made.
64	16th September. 8 A.M.	Rajhara mine, Rajhara P. O., Bihar.	Dengal Coal Co., Ltd.	Chhoton Singh, (m.), 30, Coal-cutter.	Coal.	While filling a basket with coal in an underground gallery, deceased was fatally injured by a mass of stone, 1' 8" x 1' x 7", which fell from the roof from a height of 7 feet. Inspection and inquiry made.
65	21st September. 3 P.M.	Balharaj mine, Kusunda P. O., Bihar.	Balharaj Colliery Co., Ltd.	Bhagunath Bauri, (m.), 27, Coal cutter.	Coal.	While deceased was at work in a gallery, a mass of coal and shale, 15' x 3' 6" x 3' x 6", fell from the roof from a height of 2½ feet and killed him instantly. A concealed "ship" at the side of the gallery caused the fall. Inspection and inquiry made.
66	21st September. 5.45 A.M.	Sendra mine, Bamyora P. O., Bihar.	Sendra Coal Co., Ltd.	Akloo Bhuiya, (m.), 27, Loader.	Coal.	While removing fallen coal in a depillaring area, deceased was struck and fatally injured by a mass of coal, 4' x 1' 6" x 8", which fell off a "ship" from the roof at a height of 10 feet. Inspection and inquiry made.
67	2nd October. 10 P.M.	Bhulanbarore mine, Pathardih P. O., Bihar.	Bhulanbarore Coal Co., Ltd.	Budhi Majhi, (m.), 30, Coal-cutter.	Coal.	While dressing the roof of a gallery 7 feet high, deceased was fatally injured by a mass of coal, 1' 6" x 1' 6" x 3", which fell off a concealed "ship" in the roof. Inspection and inquiry made.
68	2nd October. 9 P.M.	Makeral mine, Treg P. O., Punjab.	R. S. L. Ishardas Kapur and another.	Gulsham Khan, (m.), 25, Coal-cutter.	Coal.	Deceased was killed by a mass of shale, 3' x 2' 6" x 7", which fell from a "ship" in the roof at a height of 6 feet. Inspection and inquiry made.

69	10th October, 1 P. M.	Makeral mine, Treg P. O., Punjab.	R. S. Lala Ishardas (Kapur & another).	Yar Mohd., (m.), 32, Lorier	Coal	Deceased was fatally injured by a mass of shale, 7' x 2' x 7" which fell from the roof at a height of 5 feet in a depillaring area. Inspection and inquiry made
70	11th October, 3 A. M.	Kurherbarre mine, Girga P. O., Bihar.	State Railways Coal Department.	Dakhy Pass, (m.), 30, Coal cutter.	Coal	A mass of stone fell from a "slip" running near the edge of a goaf and displaced a cog, which struck deceased, inflicting fatal injuries.
71	14th October, 10-15 A. M.	Chugus mine, Chugus P. O., Central Provinces	Sir Biseewardas Daga and M. B Dadabhai	Adala Konda Malla, (m.), 28, Tramway	Coal	Deceased was loading a tub with coal in a gallery, when a mass of coal 5' x 2' x 6" thick, fell on him from the roof at a height of 10 feet, without warning. He was killed on the spot.
72	14th October, 8-45 P. M.	Bhatice mine, Molunda P. O., Bihar.	Bengal Bhatice Coal Co., Ltd	Chutar Mahata, (m.), 31, Engine driver	Coal	While a new haulage rope was being wound on the drum of a haulage engine a prop was dislodged, and while preparations were being made to replace the prop a mass of stone, 4' x 2' x 12", fell from the roof. The haulage engine driver was walking out of the haulage engine room when he was struck and fatally injured by the falling stone. Inspection and inquiry made
73	16th October, 12 noon.	Parbilla mine, Nitura P. O., Bihar.	Bengal Coal Co., Ltd.	Foudan Haram, (m.), 32, Labourer.	Coal	While engaged in hydraulic sand-stowing operations in a goafed area, deceased was knocked down by a fall of roof coal and was suffocated by the stowing materials before he could be extricated. Inspection and inquiry made
74	24th October, 6-10 P. M.	Amlabad mine, Jeaigora P. O., Bihar.	Eastern Coal Co., Ltd.	Saturam Abir, (m.), 39, Mitar Numa, (m.), 35; Coal-cutter.	Coal	While machine cut coal was being loaded in a gall 17, 7 feet high, by three miners a mass of coal, 20' x 9' x 3', fell from between two converging "slips" in the roof. The deceased were buried and killed instantly by the falling roof coal. Inspection and inquiry made.
75	25th October, 5 P. M.	Jaunty Central mine, Karmatar P. O., Bihar.	Jaunty Central Colliery Ltd.,	Tribhuban Tari, (m.), 25, Coal-cutter.	Coal	While deceased was cutting roof coal in a gallery 4½ feet high, about 1 cwt of coal loosened by his pick fell on him. He sustained injuries to which he succumbed five days later. Inspection and inquiry made.
76	26th October, 4 30 A. M.	Jamaolaba mine, Jeaigora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Durga Singh, (m.), 36, Loader.	Coal	A loader went through the fence at the edge of a goaf to load coal which had fallen just inside the fence from the corner of the pillar under extraction. He was struck by a mass of stone 6' x 2' x 6" which fell from the roof from a height of 12 feet and was fatally injured. Inspection and inquiry made.
77	26th October, 5 30 A. M.	Datta mine, Jummedeo P. O., Central Provinces.	Amalgamated Coal fields, Ltd.	Shivjee Bhoyar, (m.), 30, Loader.	Coal	While filling coal in a depillaring area, deceased was struck and fatally injured by a piece of roof coal, 1'9" x 1'8" x 8", which fell from a height of 8½ feet. Inspection and inquiry made.

APPENDIX II—*contd.*Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mine, and person worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—<i>contd.</i>						
(a) Falls of roof—<i>contd.</i>						
78	14th November, 12 midnigt	Eklhra mine, Parasia P. O., Central Provinces.	Amalgamated Coal- fields, Ltd.	Basoo Chamar, (m.), 28, Coal-cutter.	Coal	While at work in a depillaring area, deceased was struck and fatally injured by a mass of roof shale, weighing about 2 cwt., which fell from a height of 5 feet. Inspection and inquiry made.
79	15th November, 11 P.M.	Lodna mine, Jharia P. O., Bihar.	Lodna Colliery Co., (1920), Ltd.	Bhulai Kori, (m.), 39, Assistant timberman	Coal	Deceased went to remove a prop which had been dislodged by means of a safety prop withdrawn in a depillaring area in a seam, 8 feet thick, during the withdrawal of props, when he was seriously injured by a piece of stone, 2' x 1'6" x 11", which fell from the roof. He succumbed to injuries 22 days later. Inspection and inquiry made.
80	11th December, 3 30 P.M.	Sendra mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ltd.	Matru Rawani, (m.), 45, Labourer.	Coal	Deceased entered a goafed area to get a "jld", when a mass of stone 1' x 9' x 3' fell on him from a height of 18 feet inflicting fatal injuries. Inspection and inquiry made.
81	12th December, 8 P.M.	Bhulanarawo mine, Pahardin P. O., Bihar.	Bhulanarawo Coal Co., Ltd.	Pahala Pasa, (m.), 30, Loader.	Coal	Due to a sudden "bump" in a depillaring area, a mass of coal 2' x 1'6" x 1' thick fell from two concealed "slips" in the roof at a height of about 8 feet and struck deceased who was carrying coal from his working place to the loading line. He received serious injuries to which he succumbed 10 days later. Inspection and inquiry made.
82	20th December, 4 A.M.	Junordeo No. 2 mine, Junordeo P. O., Central Provinces	Central Provinces Syndicate, Ltd.	Kaloo Sing, (m.), 30, Coal-cutter.	Coal	While loading coal in a depillaring area, deceased was struck and fatally injured by a fall of roof, 6' x 3'6" x 1'6", which suddenly became dislodged from between two concealed "slips" at a height of 10 feet. Inspection and inquiry made.

83	20th December. 4-45 A.M.	Mithani mine, Sitarampur P. O., Bengal.	Aldith Coal Co., Ltd.	Puran Roy, (m.), 48; Dakhi Kole, (m.), 30. <i>Coal cutters.</i>	Coal	While a gang of miners was cutting floor-coal in a depillaring area, a mass of shale, $25' \times 12' \times 6''$ thick, fell on them from a height of 11 feet. Two were fatally injured and another miner sustained serious injuries. Inspection and inquiry made.
84	20th December. 5 30 A.M.	Jamadoba mine, Jangra P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Kashi Mahto, (m.), 34. <i>Coal-cutter</i>	Coal	While deceased was examining the roof in his working place in a depillaring area, a mass of shale, $2' \times 13' \times 4' = 6''$ thick, fell on him from the roof at a height of about 8 feet, causing fatal injuries. Inspection and inquiry made.
85	28th December. 12.30 P.M.	Serampur mine, Girdih P. O., Bihar.	State Railways, Coal Department	Ibrahim Mesh, (m.), 25, <i>Coal cutter</i>	Coal	Deceased was struck and fatally injured by a mass of roof shale, $2'6'' \times 1'6'' \times 6''$, which fell from a height of 6 feet on a loading level. Inspection and inquiry made.
(3) Falls of sides (35 deaths)						
86	2nd January, 11 30 A.M.	Baragolai mine, Majherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Hrasangh Chettri, (m.), 35, <i>Coal cutter.</i>	Coal	While at work in an "opening", deceased was struck and killed instantly by a mass of coal which fell from the side at a height of 12 feet. Inspection and inquiry made.
87	6th January. 6 P.M.	Sendra Bansaora mine, Bansaora P. O., Bihar.	Sendra Bansaora Colliery Co., Ltd.	Jamrahi Mesh, (m.), 35, <i>Coal-cutter</i>	Coal	In a depillaring area in a seam 6 feet thick, while deceased was filling a basket with coal, a slab of coal, $2' \times 1'6'' \times 9''$, burst off the rib along the side of the goaf. He was struck by the falling coal and sustained fatal injuries. Inspection and inquiry made.
88	8th January, 3 20 P.M.	Upperchalla mine, (Labour Division), Kodarma P. O., Bihar.	Christian Mining Co., Ltd.	Bira Maahabar, (m.), 40, <i>Contractor.</i>	Mica	While deceased was engaged in cleaning an old pit, a mass of schist, $3' \times 2'6'' \times 1'$, fell from a "skip" in the side and killed him instantly. Inspection and inquiry made.
89	16 January. 6 A.M.	West Jamuria mine, Chattrapur P. O., Bengal.	West Jamuria Coal Co., Ltd.	Naran Singh, (m.), 40, <i>Assistant timberman.</i>	Coal	While a timberman and his two assistants were preparing to build a chock at the edge of a goaf under the supervision of an overseer, a mass of coal, weighing about 6 cwt, suddenly fell from the side at a height of 9 feet and struck deceased. He received serious injuries which proved fatal 12 days later. Inspection and inquiry made.
90	20th January, 4-15 P.M.	Sendra Bansaora mine, Bansaora P. O., Bihar.	Sendra Bansaora Colliery Co., Ltd.	Etwari Bhuva, (m.), 32, <i>Loader.</i>	Coal	While filling his basket with coal, a loader was fatally injured by a mass of side coal, $4'6'' \times 3'6'' \times 9''$ thick, which fell on him from a height of 9 feet. Inspection and inquiry made.

APPENDIX II—*contd.*

1939

Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name, and situation of mine	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—<i>contd.</i>						
(b) Falls of sides—<i>contd.</i>						
81	21st January, 7-30 A.M.	Meitani mine, Saurampur P. O., Bengal.	Aldah Coal Co., Ltd.	Boseon Roy, (m.), 40. Coal cutter.	Coal	While deceased was loading a basket with coal near a pillar under extraction, he was struck and fatally injured by a mass of coal, 3'x2'x1', which suddenly fell from the side at a height of 3½ feet. Inspection and inquiry made.
82	24th January, 12-30 P.M.	Bajid mine, Sunderchak P. O., Bengal.	Equitable Coal Co., Ltd.	Dhukon Keol, (m.), 48. Coal-cutter	Coal	Deceased was holding a light while a miner was levelling down some overhanging coal in a gallery. A mass of coal, 1'x1'x9", fell unexpectedly from a height of 8 feet and struck deceased who sustained fatal injuries. Inspection and inquiry made.
83	26th January, 5 A.M.	Sodepur (Nos. 9 & 10) mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Masrudan Mahato, (m.), 42. Loader.	Coal	While deceased was filling a basket with coal in a gallery driven through a pillar preparatory to d pillaraging, a mass of coal, 4'x2'x2', fell from the side, due to weighting from the goaf. Deceased was caught by the fall and fatally injured. Inspection and inquiry made.
84	30th January, 7 P.M.	Joceta mine, Supa P. O., Bihar.	Arasab Brothers, Ltd.	Uyr Meah, (m.), 36. Loader.	Coal	During the course of extracting a pillar of coal in a seam 22 feet thick, a miner was dressing the side near the roof after firing a shot. A mass of coal weighing about 1 ton suddenly fell off a "cleat" from the point where he was dressing and it struck and killed instantly a loader who was showing him a light. A second piece of coal weighing about ½ ton fell immediately afterwards and broke the ladder on which the miner was working and he sustained serious injuries by falling 18 feet on to the floor. Inspection and inquiry made.

95	1st February, 6.30 A.M.	Bhulanbaroo mine, Pardhuth P. O., Bihar.	Bhulanbaroo Coal Co., Ltd.	Bisundew Singh, (m), 48, Mungaswar Gope, (m), 27, Loaders	Coal	While two loaders were robbing the side of a gallery, 16 feet high, a mass of coal, 20'x12'x16", fell off a pronounced cleavage plane running parallel to the side. They were buried under the fallen coal and killed instantly. Inspection and inquiry made.
96	2nd February, 8 P.M.	Bhatlith mine, Mandua P. O., Bihar.	Bengal Bhatlith Coal Co., Ltd.	Pratulla Kumar Singh, (m), 38, Overman	Coal	While an overman was supervising the withdrawal of props in a depillaring area in a seam 9 feet thick, a mass of shale, 10'x1'6"x1', fell from the right side of the gallery in which he was standing. The shale dislodged two props and fell on him from a height of 7 feet. He was fatally injured. Inspection and inquiry made.
97	4th February, 3.30 P.M.	Tiroli North mine, Tiroli P. O., Central Province	Central Province Manganese Ore Co., Ltd.	Kalooram Gond, (m), 33, Labourer	Manganese ore.	Deceased was assisting to deepen a surface drain 16 feet deep, when a mass of side, measuring about 20'x9'x2', fell on him. He was suffocated before he could be extricated from the fall. Inspection and inquiry made.
98	1th February, 2.30 P.M.	Central Smulth mine, Katrasgarh P. O., Bihar.	B. Banerjee	Bura Ram, (m), 23, Coal-cutter	Coal	While at work in an opencast excavation, deceased was partly buried by a mass of earth and stone, 20'x6'x10', which fell from the side from a height of 20 feet. He received injuries which proved fatal the following day. Inspection and inquiry made.
99	9th February, 8 A.M.	Dishergarh mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Rupchand Kando, (m), 36, Loader	Coal	While a loader was carrying a basket of coal from a place where depillaring operations were in progress, he was struck by a mass of coal, 8'x4'x1'6", which fell from the side of a pillar and killed instantly. Inspection and inquiry made.
100	10th February, 1.30 A.M.	Mithani mine, Sitarampur P. O., Bengal.	Albith Coal Co., Ltd.	Banka Bouri, (m), 26, Coal cutter.	Coal	It is presumed that deceased was sleeping at the side of a tramming level, when he was struck by a mass of coal, which fell from the side at a height of 5 feet. He was killed instantly. Inspection and inquiry made.
101	10th February, 2 P.M.	Sevalia mine, Sevalia P. O., Bengal.	Bombay, Farola and Central India Railway.	Jam Mohamed Mohamed Razak, (m), 40, Labourer.	Stone	After blasting operations in a stone quarry, deceased, contrary to instructions, went to recover his hammer, when a mass of side, 4'x3'x2'6", fell and killed him on the spot. Inspection and inquiry made.
102	10th February, 1.30 P.M.	Tora mine, Jharsa P. O., Bihar.	Phanji Dewji & Sons.	Rups Singh, (m), 40, Coal-cutter.	Coal	While coal was being dressed from the side of a pillar after blasting, a mass of coal 14'x3'6"x1'3" fell and struck deceased, who was holding a light for the person engaged in dressing. He received serious injuries and died 2½ hours later. Inspection and inquiry made.

Fatal Accidents during the year 1939 - *contd.*

Sl. No.	Date and hour of accident.	Name and situation of mine	Name of owner	Name, sex, age and occupation of person killed.	Name of mineral worked	Cause of accident and remarks
FALLS OF ROOF AND SIDES—<i>contd.</i>						
<i>(b) Falls of sides—contd.</i>						
103	25th February, 7-30 P. M.	Brijlath mine, Sunderbakh P. O., Bengal.	Equitable Coal Co., Ltd.	Shib Charan Tanti (m.), 31, Coal-cutter.	Coal	Deceased was cutting coal at the face of a "bench" in a depillaring area, when a mass of coal, 10' x 6' x 9' thick, fell from the side from a height of 8 feet. He was struck and fatally injured. Inspection and inquiry made.
104	27th February, 11-30 A. M.	Haregolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Budhaman Newar. (m.), 30, Coal-cutter.	Coal	While deceased was at work in an 'opening' 75' x 60' x 30' high, a mass of coal, weighing about a ton, fell from the side from a height of 15 feet. Deceased was struck and killed instantly. Inspection and inquiry made.
105	2nd February, 12 Noon.	Bokaro mine, Bokaro P. O., Bihar.	East Indian Railway and Bengal Nagpur Railway.	Budram Ramnania. (m.), 26, Earth-cutter.	Coal	While engaged in the removal of overburden in a quarry, an earth cutter was burned and killed instantly by a mass of earth, 4' x 2' x 2', which fell from an undercut side at a height of 4 feet, Inspection and inquiry made.
106	2nd March, 5-30 A. M.	Khas Kirkend mine, Kusunda P. O., Bihar.	Khas Kirkend Coal-livery Co.	Prasadi Bihariya, (m.), 30, Coal cutter.	Coal	While deceased was cutting coal from the side of a gallery, 7 feet high, a piece of coal, 2' x 2' x 3", fell on him from a concealed "slip". He sustained serious injuries to which he succumbed five days later. Inspection and inquiry made.
107	7th March, 10 P. M.	Bankamula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Bajirangi Pasha, (m.), 32, Coal cutter.	Coal	Deceased was levering coal from a "stook" in a depillaring area, when a mass of coal, weighing about 2 tons, suddenly fell from a pronounced cleavage plane. He was struck by the falling coal and killed instantly and four other persons were seriously injured. Inspection and inquiry made.
108	10th March, 6-30 A. M.	Dharmo Main mine, Sitaranpur P. O., Bengal.	Dharmo Main Coal Co., Ltd.	Chaiton Chamar, (m.), 32, Coal-cutter.	Coal	A miner was struck and fatally injured by a mass of coal, weighing about 10 cwts., which fell from the side of a pillar, from a height of 8 feet. Inspection and inquiry made.

109	14th March, 10-30 A.M.	Blowra mine, Jalgaon P. O., Bihar	Eastern Coal Co., Ltd.	Jabba Mahatan, (m.), 18, Labourer	Coal	While debris was being removed from a new incline cutting 18 feet deep and 14 feet wide a piece of decomposed shale, 9' x 5' x 9", fell from the side from a height of 9 feet. Deceased was struck and fatally injured and another person was seriously injured. Inspection and inquiry made.
110	17th March, 4-30 A.M.	Kirtore mine, Kusunda P. O., Bihar	Ranegunge Coal Association, Ltd.	Fata Dasad, (m.), 48, Loader	Coal	While deceased was at work in a depillaring area a mass of coal, 3' x 5' x 9" fell on him from a height of 7 feet from the side of a pillar. He was seriously injured and died 3 days later. Inspection and inquiry made.
111	25th March, 6 30 A.M.	Beldih mine, Sunderchak P. O., Bengal.	Equitable Co., Ltd.	Kanai Mondal, (m.), 38; Payu Mahato, (m.), 34, Coal-cutters.	Coal	While a number of miners was cutting floor coal in a depillaring area, a "bump" occurred and a mass of coal weighing about 2 tons fell from the side at a height of 1½ feet. Two of the miners were buried by the falling coal and killed instantly. Inspection and inquiry made.
112	29th March, 5 A.M.	Beldih mine, Sunderchak P. O., Bengal.	Equitable Co., Ltd.	Pitam Kumar, (m.), 30, Coal cutter	Coal	While deceased was sitting at the side of a tramming level he was struck and fatally injured by a mass of coal weighing about 4 cwt., which fell from the side at a height of 8 feet. Inspection and inquiry made.
113	29th March, 8 30 A.M.	West Jamuria mine, Charaspur P. O., Bengal.	West Jamuria Coal Co., Ltd.	Bhuko Mahato, (m.), 40, Loader	Coal	While coal was being loaded in a depillaring area a "bump" occurred in the goaf, causing about 10 tons of suite coal to fall from a pronounced "slip" in an adjoining pillar. Deceased was caught by the fall and received serious internal injuries to which he succumbed 3 hours later. Inspection and inquiry made.
114	7th April, 3 A.M.	Dharmaband mine, Katrasgarh P. O.,	New Tetturiya Coal Co., Ltd.	Sikar Majhi, (m.), 38, Coal cutter.	Coal	While deceased was loading coal in a gallery, a mass of coal and stone, 5' x 4' x 3', suddenly became dislodged from a hidden "slip" in the roof at a height of 9 feet. He sustained injuries which proved fatal within a few hours. Inspection and inquiry made.
115	11th April, 5 45 P.M.	Wah mine, Wah P. O., Punjab.	Associated Cement Companies, Ltd.	Gulab, (m.), 30, Labourer.	Lime- stone.	While levering down a mass of rock weighing 2 tons, deceased overbalanced and fell in front of it. He was killed on the spot and another labourer was seriously injured. Inspection and inquiry made.
116	13th April, 11-45 P.M.	Beldih mine, Sunderchak, P.O., Bengal.	Equitable Coal Co., Ltd.	Rajnath Roy, (m.), 48, Coal-cutter.	Coal	While deceased was filling a basket with coal in a gallery, 9 feet wide and 8 feet high there was a severe "bump", when a fall of about 1 cwt. of coal from the side knocked out a prop, which struck deceased, inflicting fatal injuries. Inspection and inquiry made.

APPENDIX II—*contd.*Fatal Accidents during the year 1939—*contd.*

Serial Number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed	Name of mineral worked.	Cause of accident and remarks
FALLS OF ROOF AND SIDES—<i>contd.</i>						
(b) Falls of sides—<i>contd.</i>						
117	18th April. 4.30 A.M.	Ekra Khos mine, Bansjora P. O., Bihar.	Maharaja Nandy.	S. G. Ramadhin Pasi, (m.), 40, Loader.	Coal.	After a shot had been fired in roof coal in a depillaring area in a seam 20 feet thick, a miner was dressing the roof, when two loaders entered the place to load coal. Although warned to leave the place until dressing was completed, they commenced loading. A mass of coal weighing about 2 cwt. fell from the corner of a pillar and struck one of them, killing him instantly. Inspection and inquiry made.
118	27th April. 9.30 A.M.	Dakergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Chaman Mahato, (m.), 38, Timberman.	Coal.	While deceased was erecting a spring to secure the side of a level gallery, 7 feet high a mass of coal, weighing about a ton, fell away from a height of 6 feet and struck him, inflicting serious injuries which proved fatal 5 days later. Inspection and inquiry made.
119	9th May, 5.30 P.M.	Datta mine, Jannondeo P. O., Central Provinces	Amalgamated Coal- fields, Ltd.	Mahulal Mehro, (m.), 23, Coal carrier	Coal.	While placing his tools near the corner of a pillar, a mass of coal, weighing about 7 cwt. fell on deceased from the side at a height of 9 feet. He was struck and received injuries which proved fatal 12 weeks later. Inspection and inquiry made.
120	10th May, 5 A.M.	Lodna (Nos. 1 & 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920) Ltd.	Badri Tewari, (m.), 35; Jagdin Ahir, (m.), 25; Loaders.	Coal	While loading coal from the side of a pillar after blasting, a mass of coal, 4'3" x 10", fell from the side of the pillar from a height of 17 feet. The deceased were struck by the mass of coal and killed instantly, and another loader was seriously injured. Inspection and inquiry made.
121	11th May, 11.30 A.M.	Gua Mine, Gua P. O., Bihar.	Indian Iron & Steel Co., Ltd.	Sda Kuli, (f.), 25, Labourer.	Iron Ore	While deceased was sitting near the side of a quarry, where some debris had accumulated a mass of this debris fell on her without warning. She was buried and was suffocated before she could be extreated. Inspection and inquiry made.

122	14th May, 7 A.M.	Bajid mine, Sunderbark P. O., Bihar	Equitable Coal Co., Ltd.	Marat Goria, (m), 30, Baymath Dubey, (m), 24, Coal cutters Modon Sin, (m), 26, Labourer	Coal	Four miners left their working place and entered a fenced area in order to obtain some loose coal, when a mass of coal, weighing about 2 tons fell from the mine. The deceased sustained fatal injuries and the two other miners were seriously injured. Inspection and inquiry made.
123	16th May, 8 P.M.	Bhulanbarare mine, Pathardih P. O., Bihar	Bhulanbarare Coal Co., Ltd	Coal cutters Modon Sin, (m), 26, Labourer	Coal	While deceased was loading coal which had fallen from tubs on a tramline in a depollaring area, a mass of coal, 10' x 8' x 3', fell from the side from a height of 8 feet and killed him instantly. Inspection and inquiry made.
124	16th May, 2-15 A.M.	East Bhugautdih mine, Jharia P. O., Bihar.	East Bhugautdih Colliery Co., Ltd	Joti Bauri, (m), 32, Coal-cutter.	Coal	While robbing coal from the side of a pillar, deceased was struck by a mass of coal, 6' x 4' x 1'3", which fell from the side from a concealed "ship" at a height of 6 feet. He sustained serious injuries to which he succumbed some 4 hours later. Inspection and inquiry made.
125	10th May, 1-2-30 A.M.	Phra Khas mine, Bansjora P. O., Bihar.	Maharaj S. C Nandy	Ithama Bhuya, (m), 30, Loader	Coal	While three loaders were filling their baskets in front of a pillar 22 feet high, which was being extracted, a mass of coal, weighing about 15 tons, fell off the side in which there was a "ship". One was killed instantly and another was seriously injured. Inspection and inquiry made.
126	27th May, 1-45 A.M.	Bhulanbarare mine, Pathardih P. O., Bihar.	Bhulanbarare Coal Co., Ltd.	Natas Muchi, (m), 44, Loader	Coal	While deceased was sitting in a gallery 14 feet in height, a mass of coal, 14' x 11'5' x 3' thick, fell from the side of a pillar off a pronounced "cleavage plane" running parallel to the side. He was buried beneath the fall of coal and killed instantly. Inspection and inquiry made.
127	6th June, 5 P.M.	Harai mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Kamad Gond, (m), 35, Loader.	Coal	While deceased was filling coal in a depollaring area, a mass of coal fell from the side of the pillar under extraction and dislodged three props. He was struck by one of the props and received injuries which proved fatal two days later. Inspection and inquiry made.
128	th June, 3-30 P.M.	Kurharbarare mine, Girdih P. O., Bihar.	State Railways Coal Department.	Chinlo Telly, (m), 29, Coal-cutter.	Coal	While at work in a gallery deceased was seriously injured by a mass of coal, 3'6" x 3' x 1'3" which fell off a "ship" from a side of the gallery at a height of 7 feet. He succumbed to his injuries four hours later. Inspection and inquiry made.
129	11th June, 12 Noon.	Rangakanall mine, Kumail P. O., Bengal.	Ram Sompal Ojha	Ashu Bauri, (m), 22, Miner.	Freelance	While at work in an excavation for fireclay, 26 feet deep, a miner was struck and fatally injured by a mass of overhanging stone, 6' x 3' x 4', which fell from the side from a height of 3 feet. Another miner sustained serious injuries. Inspection and inquiry made.

Fatal Accidents during the year 1939—contd.

Sl. No.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
<i>(b) Falls of sides—contd.</i>						
10	17th June, 5.40 P.M.	Ekra Khav mine, Bansjora P. O., Bihar	Maharaja S. C. Nandy.	Pitambar Lodhi, (m.), 30, Coal-carrier.	Coal.	While at work in a depulping area a coal carrier was struck and fatally injured by a mass of coal about 6 cwt. in weight, which fell off the side of a pillar at a height of 16 feet. Inspection and inquiry made.
11	29th June, 2 P.M.	Dahergadh mine, Dahergadh P. O., Bengal	Equitable Coal Co., Ltd.	Chotika Majhi, (m.), 33, Labourer.	Coal.	While four loaders were filling coal after blasting at a junction of four galleries in a depulping area, a mass of coal, 9' X 5' X 1', fell from the side of an adjoining pillar and dislodged several props. Deceased was struck by one of the props and killed instantly. Inspection and inquiry made.
12	8th July, 11 A.M.	Sodepur Nos. 10 and 11 mine, Sunderbark P. O., Bengal	Bengal Coal Co., Ltd.	Bondhu Bauri, (m.), 25, Guhram Bauri (m.), 27, Labourers.	Coal.	While a stone cutter and two labourers were engaged in cleaning stones from a dip gallery, adjoining a goaf, a "bump" occurred, causing a mass of coal, 50' X 9' X 2', to fall from the side. The labourers were struck and killed instantly. Inspection and inquiry made.
13	11th July, 10 P.M.	Sripur (Nos. 1, 2 and 3) mine, Kalyahari P. O., Bengal	Lodna Colliery Co. (1920), Ltd.	Lodha Majhi, (m.), 27, Labourer.	Coal.	While deceased was filling a basket with coal in a gallery he was struck and fatally injured by a mass of side-coal, 4' X 4' X 2'6", which fell on him from a height of 7 feet. Inspection and inquiry made.
14	12th July, 3.10 P.M.	Kusunda and Njachee mine, Kusunda P. O., Bihar	Kusunda and Njachee Collieries Co.	Hari Charan Beldar, (m.), 45, Coal cutter.	Coal.	While deceased was cutting floor coal in a quarry, 35 feet deep, a mass of coal and stone weighing about 40 tons slipped from the side and he was struck and killed instantly. The fall of side was due to rain water percolating down the inclined face of a "slip". Inspection and inquiry made.

135	15th July, 1.15 A.M.	Saranpur mine, Giroh P. O., Bihar	State Railways, Coal Department.	Jitan Turi, (m.), 38, Coal-cutter	Coal	While a gang of miners was engaged in cleaning an old roadway adjoining a <i>dephling</i> area, a "jump" occurred causing a mass of coal, 5' x 1' x 6', to fall from a side of the roadway at a height of 5 feet killing deceased on the spot. Inspection and inquiry made.
136	20th July, 5 P.M.	Barguda mine, Margaria P. O., Assam	Assam Railways and Trading Co., Ltd.	Shar Bahadur, (m.), 32, Coal-cutter	Coal	While working in an "opening" deceased was struck and fatally injured by a mass of coal, about 5 cwt in weight which fell from the side, from a height of 15 feet. Inspection and inquiry made.
137	22nd July, 11.10 P.M.	Borra Bheema mine, Saranpur P. O., Bengal	Borra Bheema Coal Co., Ltd.	Parameswar Singh, (m.), 58 Lodger	Coal	Deceased was engaged in carrying coal in a <i>dephling</i> action of a mine, when a mass of coal 4' x 2' x 1' fell from the side, from a height of six feet, from between two converging "shafts". He was severely injured and died within hours later. Inspection and inquiry made.
138	25th July, 4 P.M.	Bijuli mine, Saranpur P. O., Bengal	Exportable Co., Ltd.	Parosh Pandit, (m.), 36 Coal cutter	Coal	While a number of persons was working in a <i>dephling</i> area, a mass of coal 7' x 4' x 1' fell from a height of 15 feet from the side of a pillar under extraction. Deceased was struck and sustained injuries which proved fatal shortly afterwards. Inspection and inquiry made.
139	26th July, 12 Noon	Bungarua mine, Tejgaon P. O., Bengal	Singaran Coal Syn- dicate, Ltd.	Ashu Han, (m.), 38, Coal cutter	Coal	Deceased was dressing down open coal from the side of a pillar when a mass of coal, 16' x 8' x 1', fell on him from a height of 12 feet. He was killed instantly. Inspection and inquiry made.
140	1st August, 10.30 A.M.	Bulhar mine, Kasauli P. O., Bihar	East Indian Coal Co., Ltd.	Lachmi Shaw, (m.), 26, Labourer	Coal	While deceased was cleaning the floor of a gully 17 feet high in a <i>dephling</i> area, a mass of coal, weighing about 1 ton, fell from the corner of a pillar. He was struck by the falling coal and received injuries to which he succumbed 4 days later. Inspection and inquiry made.
141	14th August, 1 P.M.	Lald mine, Bomelanch P. O., Bihar	Christian Mining Co., Ltd.	Kishor Chandra, (m.), 36, Driller	Mica	While deceased was engaged in preparing holes in the sides of a slope drive, he was struck and fatally injured by a mass of schist, weighing about 2 cwt., which fell from the hanging wall from a height of about 3 feet. Inspection and inquiry made.
142	15th August, 5 P.M.	Chandauli mine, Chakul P. O., Bihar	Christian Partner- ship	Rahma Majha, (m.), 22, Miner	Mica	While at work at the bottom of an open excavation, 18' x 9' x 14' deep, deceased was buried under a large mass of earth, which suddenly fell from the side. He was dead when extricated. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Date and hour of accident	Name and situation of mine	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—<i>contd.</i>					
(b) Falls of sides—<i>contd.</i>					
143 27th August, 9 30 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Gonah Turi, (m), 32. <i>Coal-cutter.</i>	Coal	While deceased and another coal-cutter were engaged in splitting a pillar preparatory to extraction, a severe "bump" occurred in the roof, causing several tons of coal to fall from the sides of pillars. Deceased was caught by the fall and fatally injured, and his companion escaped with minor injuries. Inspection and inquiry made.
144 26th August, 4 P.M.	Bhadra mine, P. O. Jhurra-Telaiya Bih ar.	Smt. Gouri Kumari Bih ar.	Abdul Man, (m), 30. <i>Driller.</i>	Mea	While persons were engaged in drilling shot-holes at the bottom of a sinking shaft, 63 feet deep, a mass of soft stone 4' x 2' x 2' suddenly fell from the side, from a height of 28 feet. One of the men was fatally injured and another sustained serious injuries.
145 28th August, 3 15 P.M.	South Bullari-Kendua mine, Kuerunda P. O., Bihar.	East Indian Coal Co., Ltd.	Gohan Bhuaya, (m), 26. <i>Loader.</i>	Coal	While at work in a decuplating area, deceased was seriously injured by a mass of coal, 4' x 2' x 1' 6", which fell from a side of a pillar at a height of 8 feet. He succumbed to his injuries 7 hours later. Another loader was seriously injured. Inspection and inquiry made.
146 29th August, 10-15 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Hanif Meah, (m), 30. <i>Loader.</i>	Coal	While deceased was carrying coal in a decuplating area, a mass of coal, 2' x 2' x 1', fell from the side at a height of 11 feet. Deceased was struck by the coal, and sustained fatal injuries. Inspection and inquiry made.

147	30th August, 12 Noon	Jambad Selected mine, Kajoragram P. O., Bengal.	Devji Ghebbas & Bros	Sujan Majhi, (m.), 45, Coal-cutter.	Coal	While robbing coal from a fencel off gallery, deceased was fatally injured by a mass of coal, 4' x 2' 6" x 2', that fell on him from the side of a pillar at a height of 14 feet. Inquiry made.
148	26th September, 10 P. M.	Lodna (Nos 4 & 5 Pits) mine, Jharia P. O., Bihar	Lodna Colliery Co., (1920), Ltd	Angan Pashi, (m.), 35, Coal-cutter	Coal	While coal was being loaded in a depillaring area in a seam, 26 feet thick, a mass of coal, 25' x 12' x 3', fell without warning from the side of a pillar under extraction. Deceased was struck and killed instantly by the falling coal. Inspection and inquiry made.
149	27th September, 5 A. M.	Datia mine, Junnardoo P. O., Central Provinces	Amalgamated Coal fields, Ltd.	Mulloo Goud, (m.), 28, Timberman.	Coal	While engaged in setting props in a level gallery preparatory to the extraction of a pillar, deceased was struck and killed instantly by a piece of coal, 3' x 2' x 1', which fell from the side of a pillar at a height of 9 feet. Inspection and inquiry made.
150	28th September, 12 Noon.	Dhemo Main mine, Sitarampur P. O., Bengal	Dhemo Main Coal Co., Ltd	Sabrata Meah, (m.), 36, Coal-cutter	Coal	While a number of persons was at work in a dip gallery adjacent to a depillaring area, a "bump" occurred causing several tons of coal to fall from the side. Deceased was struck and fatally injured, and another coal cutter received serious injuries. Inspection and inquiry made.
151	28th September, 5 P. M.	Satdalya mine, Koderma P. O., Bihar,	Ikazariagh Mica Mining Co., Ltd.	Lakho Gope, (m.), 36, Miner,	Mica	While deceased was working in a shallow prospecting pit, 7' x 5' x 6' deep, he was buried by a mass of earth, 4' x 2' x 1', which fell from the side from a height of 4 feet. He sustained injuries which proved fatal 29 hours later. Inspection and inquiry made.
152	4th October, 12-30 A. M.	Dhavra mine, Jalgaora P. O., Bihar.	Eastern Coal Co., Ltd.	Bipash-Bhuiya, (m.), 28, Loader.	Coal	While coal was being loaded in a machine cut gallery 8 feet high, a mass of coal, weighing 1 ton, fell from a "slip" at the rise side. Deceased was killed instantly by the falling coal and another loader was seriously injured. Inspection and inquiry made.
153	7th October, 11 P. M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Janki Dasad, (m.), 35, Bholu Dasad, (m.), 30, Coal-cutter.	Coal	While miners were engaged in extracting a pillar, a "bump" occurred, causing extensive falls of coal from the sides of pillars adjoining a goaf. The deceased were killed on the spot and another miner sustained serious injuries. Inspection and inquiry made.

APPENDIX II—*contd.*Fatal Accidents during the year 1939—*contd.*

No.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
IN SHAFTS (WHILST ASCENDING OR DESCENDING BY MACHINERY) - (1 death).						
166	11th January, 5.15 P. M.	Charanpur mine, Charanpur P. O., Bengal.	Agnor Ltd. Collieries,	Nabi Sheikh, (m.), 32, Stone-cutter.	Coal.	While four persons, including deceased, were descending a shaft 450 feet deep, in a cage, the winding rope suddenly slipped off the pulley and the cage dropped uncontrolled for a short distance. Deceased was thrown out of the cage and fell to the bottom of the shaft, a distance of about 400 feet. He was killed instantly. Inspection and inquiry made.
IN SHAFTS FALLING DOWN SHAFT—(1 death).						
167	24th February, 11.50 A. M.	Khas mine, Jharia P. O., Bihar.	Seth Tarachand Chandhymdas.	Ramzan Moah, (m.), 32, Filter.	Coal.	While a column of steam pipes, 3" in diameter, was being lowered down a shaft 303 feet deep, the lashing chain attached to the bottom pipe slipped and allowed the column to fall to the shaft bottom. The falling pipes struck the cage on which deceased, who had descended the shaft to release a socket of one of the pipes off a berton, was standing. Deceased fell to the bottom of the shaft through a distance of about 150 feet and was killed instantly. Inspection and inquiry made.
168	24th March, 11 P. M.	Pinakona mine, Nawagarh P. O., Bihar.	Jivan Gangi.	Digpal Karmi, (m.), 39, Pumpman.	Coal.	Deceased accidentally fell to the bottom of a pumping shaft through a distance of about 11 feet. He sustained internal injuries and died 24 days later. Inspection and inquiry made.
169	29th March, 2.30 A. M.	Barare mine, Jalgaon P. O., Bihar.	East Indian Coal Co., Ltd.	Jagdeo Jeswara, (m.), 30, Labourer.	Coal.	While a tub of coal was being raised in a shaft 215 feet deep it fouled the cage receiving guide rails at the banking level because it was not properly secured in the cage by the tub-stops. Deceased was assisting in securing the tub and replacing it in the cage when the tub overbalanced and fell from the cage to the bottom of the shaft. He also overbalanced and fell 207 feet to the bottom of the shaft and was killed instantly. Inspection and inquiry made.

While returning to his working place deceased slipped and was fatally injured by falling into an unfenced *drifted shaft*, 20 feet in depth. Inspection and inquiry made.

While engaged in timbering a shaft, 40 feet deep, deceased was struck and fatally injured by a piece of stone weighing about 16 lbs., which fell from the side from a height of 10 feet. Inspection and inquiry made.

Deceased with another trammer was engaged in re-lining a loaded tub, the front wheels of which had fallen into the *sump* of a shaft, 550 feet deep, when pieces of stone fell from the side of the shaft and struck deceased on the head. He was killed instantly. Inspection and inquiry made.

While a gang of sinkers was at work at the bottom of a sinking shaft, 410 feet deep, a piece of stone fell from the side and struck deceased on the head. He was killed instantly. Inspection and inquiry made.

Preparatory to ascending a shaft 615 feet deep, deceased had stepped into a cage at the shaft bottom, when a large mass of stone fell from the shaft side from a height of 405 feet on to the cage, which was badly damaged, deceased sustained injuries which proved fatal shortly afterwards. Inspection and inquiry made.

A bucket filled with debris was being hoisted up a shaft, 60 feet deep, when it became disconnected from the hook, and fell to the bottom of the shaft. Deceased, who was standing at the bottom of the shaft, was struck and killed instantly. Inspection and inquiry made.

In a sinking pit a bucket full of stone was hoisted and landed on a trolley. The bucket was not placed properly on the trolley and as the latter was being pulled from the shaft through the bucket tipped and fell to the bottom of the shaft, through a distance of 52 feet. A sinker was struck and fatally injured. Another sinker sustained serious injuries. Inspection and inquiry made.

IN SHAFTS (THINGS FALLING DOWN SHAFTS)—(3 deaths)				
170	17th September, not known.	Loharwara mine, Nasirabad P. O., Rajputana.	Kanhaiya Lal and Co.	Pancha, (m), 30, Miner.
171	18th February, 2 P.M.	Karkole mine, Deori P. O., Bihar.	Indian Mica Supply Co., Ltd.	Balan Chamar, (m), 35, Labourer.
172	6th April, 1.30 P.M.	Chanch mine, Chirkunda P. O., Bihar.	Bengal Coal Co., Ltd.	Mongla Majhi, (m), 38, Trammer.
173	26th April, 9 P.M.	Anupnagar mine, Saranole Rajbari P. O., Bengal.	Aluminium Cor- poration of India, Ltd.	Upasbi Singh, (m), 40, Sinker.
174	2nd May, 10 A.M.	Saltore mine, Nituria P. O., Bihar.	Burrakur Coal Co., Ltd.	Saik Isabak, (m), 35, Labourer.
175	24th May, 4 P.M.	Lakargarbwa mine, Domchanch P. O., Bihar.	Indian Mica Supply Co., Ltd.	Banwari Rai, (m), 18, Oxporter.
176	8th June, 1 A.M.	Pikra Khas mine, Rangjora P. O., Bihar.	Maharaja S. C. Nandy.	Jamuna Singh, (m), 24, Sinker.

APPENDIX II—contd.

Fatal Accidents during the year 1939—contd.

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
IN SHAFTS (THINGS FALLING DOWN SHAFT)—contd.						
177	8th July. 1.15 P.M.	Digbarah mine, Jalgaon P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Bhagi Singh, (m.), 25, Stone-cutter.	Coal.	While loading debris in a bucket at the bottom of a sinking shaft, 170 feet deep, deceased was struck on the head and killed instantly by a piece of stone, 8"×5"×4", which fell from the side of the shaft from a height of at least 40 feet. Inspection and inquiry made.
178	11th August. 2 P.M.	Samratpur mine, Gorakhpur P. O., Bihar.	State Railways Coal Department	Bhiko Mesh, (m.), 35, Tramway.	Coal.	The bolts securing an iron plate, 11"×3'×1" to cage guides at the top of a shaft became loose and the plate fell down the shaft 40½ feet deep and struck deceased. He was fatally injured. Inspection and inquiry made.
SUFFOCATION BY GASES.—(1 death).						
179	2nd June. 3.30 P.M.	Kongara and Borjan mines, Kongara P. O., Assam.	Nadira Coal Co., Ltd.	Pit Bahadur, (m.), 30, Labourer.	Coal.	Deceased entered an underground gallery with the object of plastering one of a number of stoppings surrounding a goaf, when he was overcome by noxious gases and asphyxiated. Inspection and inquiry made.
BY EXPLOSIVES.—(17 deaths)						
180	25th January. 5.30 P.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Mithoo Chamar, (m.), 10, Coal-cutter.	Coal.	During blasting operations, deceased with others withdrew to what was regarded as a place of safety. A shot was fired and blew into an adjacent gallery, projecting pieces of coal. Deceased was struck and sustained injuries to which he succumbed six days later. Inspection and inquiry made.
181	27th January. 9 P.M.	Joteasahi mine, Toposi P. O., Bengal.	Ranajee Santan.	Jangoo Bauri, (m.), 38, Strider.	Coal.	Deceased was not given sufficient warning and he failed to take proper shelter during the firing of a shot in a gallery. He was about 60 feet from the shot when it exploded and he was struck by projected pieces of coal, receiving injuries which proved fatal about 40 hours later. Inspection and inquiry made.

182	2nd February, 11.30 A.M.	Sachpur mine, Champa P. O., Bengal	Katras Jherrah Coal Co., Ltd	Ram Lal Kothi, (m), 23, Coal cutter.	Coal.	While a shot was being fired in a depollaring area, a number of miners withdrew to a place of safety. Later they heard what they took to be the sound of the shot and returned to the place, but as deceased reached a point 20 feet from it the shot exploded, and he was fatally injured by a piece of coal projected by the charge. Inspection and inquiry made.
181	7th February, 10 A.M.	Baladurga mine, Sydapuram P. O., Madras	D. N. Reddy & V S Chetty	Tural Narsagadu, (m), 23, Driller	Mica	While two drillers were boring a shot hole in an underground gallery, some unexploded <i>gignite</i> from a previous shot was pierced and exploded. Deceased sustained serious injuries to which he succumbed three days later, and his companion sustained serious injuries. Inspection and inquiry made.
184	6th February, 5 A.M.	Nanhi mine, Champa P. O., Bengal.	Mondal Brothers	Badan Majhi, (m), 30, Coal-cutter.	Coal	Deceased was sleeping in a gallery in which blasting was being done 70 feet away. He was struck by a projected piece of coal and sustained fatal injuries. If the shot-firer had given proper warning the accident would have been avoided. Inspection and inquiry made.
185	21st April, 11.30 A.M.	Danarkhar mine, Sasaram P. O., Bihar.	Kinoo Suppliers, Ltd.	Tuli Ram, (m), 25, Mate	Lime- stone	Deceased was struck and instantly killed by a piece of rock, which was projected a distance of 300 feet during blasting operations in an open working. Inspection and inquiry made.
186	3rd May, 6 P.M.	Kotwa mine, Kolarima P. O., Bihar.	S. K. Sahana & Sons.	Khanu Khan, (m), 30, Driller.	Mica	While three drillers were engaged in drifting a hole in a tunnel, a misfired charge of explosive was struck and exploded. Deceased sustained serious injuries to which he succumbed one day later, and his companions sustained serious injuries. Inspection and inquiry made.
187	5th June, 1.10 P.M.	Khehra mine, Khehra P. O., Punjab.	Government of India.	Mohammad, (m), 65, Miner.	Rock salt.	During blasting operations deceased was killed by a projected mass of rock salt. The shot-firer failed to give proper warning. Inspection and inquiry made.
	th June, 1.30 A.M.	Bhangu Garoto mine, Japla P. O., Bihar.	Sona Valley Port- land Cement Co., Ltd.	G. C. Bhatta- cherye, (m), 32, Quarry-Asis- tant.	Lime- stone.	During blasting operations, deceased failed to take proper shelter, and was struck by a piece of rock which was projected a distance of nearly 300 feet. He sustained injuries to which he succumbed two days later. Inspection and inquiry made.

Fatal Accidents during the year 1939—contd.

Sl. No.	Date and hour of accident.	Name and situation of mine	Name of owner	Name, sex, age and occupation of person killed.	Name of mineral worked	Cause of accident and remarks
BY EXPLOSIVES—contd.						
189	22nd June, 3 30 P.M.	Kolia mine, Jumurdio P. O., Central Provinces	Raj Bahadur Seth Gowardhandas.	Talab Gond, (m), 22, Coal cutter.	Coal	Deceased entered his working place where a shot had hung fire and as he approached the place the shot exploded and he was fatally injured. Inspection and inquiry made.
190	24th July, 8 30 P.M.	Ekra Khas mine, Ransojra P. O., Bihar.	Maharaja Nandy.	Mangra Meah, (m), 47, Shot firer.	Coal	Deceased was drying loose gunpowder in an earthen pot over a fire when it became ignited. He sustained serious burns and died of shock 3 days later. The wife of deceased, who was sitting by his side was also burnt seriously. Inspection and inquiry made.
191	27th August, 10 20 A.M.	West Madhabpur mine, Ondal P. O., Bengal.	Chandanmull Indrakumar.	Nahut Chasmar, (m), 35, Shot-firer.	Coal	Two persons were severely burnt by an accidental ignition of gunpowder one of whom succumbed to his injuries. If the Indian Coal Mines Regulation 198 had been observed the accident would have been avoided. Inspection and inquiry made.
192	8th September, 6 A.M.	New Ondal mine, Ondal P. O., Bengal.	Ondal Coal Co. Ltd.	Sekha Monzol, (m), 30, Shot-firer.	Coal	Deceased set fire to a small quantity of loose gunpowder to test if it was damp, when a spark ignited some cartridges of gunpowder in a canister which he had left open. He sustained extensive burns which proved fatal 56 hours later. Inspection and inquiry made.
193	18th September, 11 A.M.	Jharla Khas (Angar pathra) mine, Sijua P. O., Bihar.	Trigunait Brothers	Birua Bhuiya, (m), 3, N/A Chedil Singh, (m), 35, Coal-cutter.	Coal	On his way to a travelling incline a miner stopped to drink water and while doing so he suspended a locked canister containing 5 lbs. of gunpowder on a vertical post outside his dhowrah. The canister fell to the ground and the gunpowder was ignited by an open fire. A child was fatally burned and two miners were severely burned. One subsequently died. Inspection and inquiry made.

104	1st December, 4.30 P.M.	Manpur Abgilla mine, Gaya P. O., Bihar	O. W. Powell and A Ghany	Sukdeo Kote, (m), 26, Stone breaker	Stone	Deceased, disregarding the orders of the manager and a shot- fire, returned to a quarry where a shot had hung fire. Deceased was within 20 feet of place of blasting when the shot exploded. He sustained serious injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
105	28th December, 10 P.M.	Bankasulda (Nos. 7 and 8 Pits) mine, Cheranpur P. O., Bengal	Bengal Coal Co., Ltd.	Tarbeni Pandey, (m), 36, Explosive carrier	Coal	An open light was accidentally brought into contact with two gunpowder cartridges and ignited them. Deceased was seriously burnt and died four days later. Inspection and inquiry made.
HAULAGE—(40 deaths)						
106	3rd January, 3 P.M.	Jamadeha mine, Jenigora P. O., Bihar	Tata Iron & Steel Co. Ltd.	Dharam Rewani, (m), 40 Haulage road attendant.	Coal	Deceased was run over and killed by a set of loaded tubs which was being raised up a haulage road with a gradient of 1 in 3. It is presumed that he was riding the set without authority when he met with the accident. Inspection and inquiry made.
107	7th January, 1.40 A.M.	Himmlusthan Lajpeth mine, Chanda P. O., Central Provin- ces.	Dirla Brothers, Ltd.	Rajam, (m), 25, Trammer	Coal	A loaded tub ran over the foot of deceased causing slight injuries. Tetanus supervened and he died one week later. Inspection and inquiry made.
108	1st February, 2.30 P.M.	Barakul mine, Parsa P. O., Central Provin- ces.	Pench Valley Coal Co., Ltd.	Ramecharan Lohar, (m), 20, Filter.	Coal	Two loaded tubs, which were being hauled up an endless haulage road, bumped into two derailed tubs, became detach- ed from the rope, ran back, and derailed at a runaway point. A fitter and his assistant, who were inspecting the runaway points, were struck and seriously injured. The fitter subse- quently died. Inspection and inquiry made.
109	11th February, 4 P.M.	Khas Kenduadish mine, Nawagah P. O., Bihar.	Bhola Mondal.	Lafaha Mahato, (m), 22, Trammer.	Coal	Deceased, contrary to orders, attempted to ride on a set of loaded tubs being raised up a haulage road with a gradient of 1 in 7. His foot slipped and he fell on the tramline and was run over by the set. He sustained serious injuries which proved fatal a few hours later. Inspection and inquiry made.
110	10th February, 8.30 A.M.	Sodepur (Nos. 9 and 10 Pits) mine, Sunderbhat P. O., Bengal.	Bengal Coal Co., Ltd.	Karu Mahato, (m), 36, Trammer.	Coal	Deceased attempted to uncouple the last two tubs of a set of seven loaded tubs, which had been set in motion on a slightly inclined haulage road. His head was crushed between the tubs and he was killed instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age, and occupation of person killed.	Name of mineral worked	Cause of accident and remarks.
HAULAGE—<i>contd.</i>					
11th February, 7.15 A. M.	Solepur (Nos. 9 & 10) Pits mine, Sunderbark P. O., Bengal.	Bengal Coal Co., Ltd.	Suknandan Garna (m. 1. 28), Ah. Mohammad, (m. 1. 38), Haulage line attendant.	Coal	While a train of 10 empty tubs was being lowered down a haulage road, dipping at 1 in 5, the leading tub became uncoupled and ran wild. The deceased who were working on the haulage road were struck by the tub and sustained fatal injuries. Inspection and inquiry made.
27th February, 11 A. M.	Harigolai mine, Merchants' P. O., Assam.	Assam Railways and Trading Co., Ltd.	Sullias Chamar, (m. 1. 21), Trammer.	Coal	Deceased inadvertently stepped on a moving haulage rope in front of a return wheel, when he was caught, pulled round the wheel, and seriously injured. Pneumonia supervened and he died nine days later. Inspection and inquiry made.
24th March, 1.30 P. M.	Baidili mine, Nankhakes P. O., Bihar.	Kumar Sarat Kumar Roy	Latan Kola, (m. 1. 50), Coal-cutter.	Coal	While a set of 9 empty tubs was being lowered down a haulage road dipping at 1 in 15, one empty tub became uncoupled and ran away to the end of the haulage road, for a distance of 100 feet. Deceased was struck and sustained serious injuries to which he succumbed 40 days later. Inspection and inquiry made.
25th March, 7.30 P. M.	Bhankumti mine, Bhirkumla P. O., Bihar.	State Railways, Coal Department.	Mohan, (m. 1. 25), Coal cutter.	Coal	Six tubs which were being loaded at the inbye end of a tramming level dipping 1 in 27, ran away and struck an empty tub that was being pulled by deceased. He was knocked down and run over by the runaway tubs and received fatal injuries. Inspection and inquiry made.
21st April, 1 A. M.	Chantolth mine, Khatagah P. O., Bihar.	Tata Iron and Steel Co., Ltd.	Sewak Dood, (m. 1. 32), Trrolleyman.	Coal	While a set of four empty tubs was being lowered on a haulage road dipping at 1 in 10, a set of loaded tubs unexpectedly came from another level and collided with the empty tubs. Deceased, who was accompanying the set of empty tubs, sustained injuries to which he succumbed a few hours later. Inspection and inquiry made.

290	1st May, 1 P.M.	Parbela mine, Bunderghat P. O., Bengal	Bengal Coal Co., Ltd.	Debedra Bauri, (m.), 27, <i>Haulage set rider</i>	Coal	While a train of five loaded tubs was being hauled up a gradient of 1 in 6, the front tub became derailed. Deceased, who was riding on the set, was thrown off and dragged a distance of 70 feet. He received injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
297	3rd May, 10 15 P.M.	Datta mine, Jumardoo P. O., Central Provinces.	Amalgamated Coalfields, Ltd.	Natya Bhayar, (m.), 26, <i>Loader.</i>	Coal	Contrary to orders deceased went on a haulage road when he was knocked down by an empty set of tubs which was being lowered. He sustained serious injuries to which he succumbed three months later. Inspection and inquiry made.
298	5th May, 2 P.M.	Dhemo Main mine, Sideraipur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Etwan Gope, (m.), 28, <i>Tramway.</i>	Coal	While deceased was attempting to swing a set of seven loaded tubs, gravitating down a gradient of 1 in 30, he dropped the sprag on to the tub, causing the last tub to derail and overturn. He was struck by the tub and killed instantly. Inspection and inquiry made.
299	12th May, 9 A.M.	Balhari mine, Kusumda P. O., Bihar.	Balhari Colliery Co., Ltd.	Sahab Mahato, (m.), 45, <i>Coal cutter</i>	Coal	While a set of seven empty tubs, which had not been properly coupled to the haulage rope, was being lowered down a haulage road dipping 1 in 10, it got detached and ran amain. Deceased, who was sitting on the haulage road was struck by the runaway tubs and received serious injuries to which he succumbed some 4 hours later. Inspection and inquiry made.
310	9th June, 9 15 A.M.	Jingora (Section B) mine, Jharia P. O., Bihar.	Jingorah (East Barrow) Colliery Co., Ltd.	Chunika Majhi, (m.), 33, Harna Majhi, (m.), 43, <i>Coal cutters</i>	Coal	While a set of five empty side tipping tubs was being lowered down a haulage incline dipping at 1 in 8, two tubs became uncoupled and ran amain. The deceased who were travelling down the haulage road were struck by the runaway tubs and killed instantly. Inspection and inquiry made.
311	24th June, 5 P.M.	Methan mine, Sitarampur P. O., Bengal.	Albion Coal Co., Ltd.	Jyotish Chandra Chakrabarty, (m.), 48, - <i>Overman.</i>	Coal	While a set of 8 loaded tubs was being hauled up an incline with a variable gradient, a coupling chain failed and seven tubs ran amain. Deceased, who was travelling down the haulage road was struck by one of the tubs and received injuries to which he succumbed four and a half hours later. Inspection and inquiry made.
312	6th July, 1 30 P.M.	Belgha mine, Bunderghat P. O., Bengal.	Liquidable Coal Co., Ltd.	Tinkori Bauri, (m.), 26, <i>Haulage engine- man.</i>	Coal	Deceased was knocked down by a loaded tub which had run wild for a distance of 600 feet due to a set of full tubs bumping into it on a haulage road dipping at 1 in 20. He sustained serious injuries to which he succumbed 4 hours later. Inspection and inquiry made.

Fatal Accidents during the year 1939—*contd.*

Sl. No.	Date and hour of accident.	Name and situation of mine.	Name of owner	Name, sex, age and occupation of person killed.	Name of mineral worked	Cause of accident and remarks.
HAULAGE—<i>contd.</i>						
213	18th July, 5.30 A.M.	New Marine mine, Kusumia P. O., Bihar.	New Marine Coal Co., Ltd.	Safi Meah, (m.), 50, Tramway	Coal	While ruling without authority on a moving set of loaded tubs, deceased was crushed between the side of a pillar and a tub. He sustained serious injuries and died shortly afterwards. Inspection and inquiry made.
216	19th July, 1.30 A.M.	Bhowra mine, Jedgora P. O., Bihar.	Eastern Coal Co., Ltd.	Somar Mahato, (m.), 28, Tramway.	Coal	While lowering a set of 6 empty tubs down a haulage incline dipping at 1 in 6, the set was stopped to allow of a safety block being opened. On resumption of lowering, the two leading tubs became uncoupled and ran again down the haulage road for a distance of 200 feet. A trammer, who was walking up the haulage road, was struck and fatally injured by the runaway tubs. Inspection and inquiry made.
215	19th July, 8 A.M.	Datia mine, Jumundeo P. O., Central Provinces	Amalgamated Coal fields, Ltd.	Zaloo Gouli, (m.), 28, Labourer.	Coal	A trolley carrying some timber props was attached to the front end of an empty set which was about to be lowered down a haulage road dipping at 1 in 5. After being lowered for some distance the trolley became detached and ran wild, striking and fatally injuring deceased, who was working on the haulage road.
216	20th July, 12.1 A.M.	Pharmabad mine, Katragarh P. O., Bihar.	New Tetturya Coal Co., Ltd.	Phinkhand Toli, (m.), 28, Tramway.	Coal	If the trolley had been properly coupled to the set the accident would have been avoided. Inspection and inquiry made. While three full tubs were being lowered down a self acting incline dipping at 1 in 4, the middle tub derailed on the curve at the bottom. Three trammers were re-railing the tub by means of a lever, when the tub which was coupled to the rope suddenly overturned and fell on two of the trammers killing one instantly and seriously injuring the other. Inspection and inquiry made.

217	1st August, 11 30 A.M.	Deoli mine, Dabergath P. O., Bihar.	Deoli Ltd.	Coal	Gajoo Peaman, (m), 32, <i>Tub Cleaner.</i>	Coal	While a set of six loaded tubs was being drawn out of a level, the draw-bar of the leading tub became detached, allowing the set to run back. In attempting to get clear, deceased fell down and sustained slight injuries. He contracted pneumonia and died 9 days later. Inspection and inquiry made.
218	4th August, 10 P.M.	Pretoria mine, Charanpur P. O., Bengal.	Seebpur Coal Co., Ltd.	Coal	Rajani Bauri, (m), 28, <i>Tramway.</i>	Coal	While deceased with four other trimmers was to raling a loaded tub, which had derailed at a curve off a level haulage road, the tub overturned and fell on him. He sustained serious internal injuries which proved fatal 10 days later. Inspection and inquiry made.
219	15th August, 10 A.M.	Dhori mine, Bokaro P. O., Bihar.	Bokaro and Ram- gar, Ltd.	Coal	Gufa Teli, (m), 24, <i>Labourer.</i>	Coal	While a set of thirteen empty tubs was being lowered down a road dipping at 1 in 7 into a tramming level, the first two tubs got derailed at the junction of the tramming level, and the main haulage road. Deceased, who was standing near the junction, was struck by the derailed tubs and he received serious injuries which proved fatal 8 hours later. Inspection and inquiry made.
220	16th August, 10 A.M.	Kustore mine, Kusmuda P. O., Bihar.	Ranongunge Coal Association, Ltd.	Coal	Nazir Meah, (m), 18, <i>Door Attendant.</i>	Coal	While operating a ventilation door on a haulage road, a door attendant was caught and seriously injured by a descending set of seven mine cars. He succumbed to his injuries three days later. Inspection and inquiry made.
221	27th August, 10 P.M.	West Gopalchuck mine, Kusmuda P. O., Bihar.	Central Kurkend Coal Co., Ltd.	Coal	Sakar Meah, (m), 32, <i>Loader.</i>	Coal	While a leader was pushing an empty tub along a level line he was overtaken by another empty tub which was being pushed. He was crushed between the two empty tubs and fatally injured. Inspection and inquiry made.
222	7th October, 10-45 A.M.	Lodna (Nos. 4 and 5 Pits) mine, Jharla P. O., Bihar.	Lodna Colliery Co., (1920), Ltd.	Coal	Kala Koiri, (m), 35, <i>Labourer.</i>	Coal	While a trolley loaded with props was being lowered on a haulage plane sloping at 1 in 12, it ran wild due to the failure of a sprag. Deceased, who was walking on the haulage road, was struck by one of the props and severely injured. Oangrenu supervened and he died 4 days later. Inspection and inquiry made.
223	10th October, 10 P.M.	Adjal Second mine, Charanpur P. O., Bengal.	Adjal Ltd.	Coal	Nepal Bauri, (m), 28, <i>Labourer.</i>	Coal	While a set of eight empty tubs was being lowered down a haulage road with a gradient of 1 in 10, the four front tubs became uncontrolled and ran wild. Deceased who was attempting to cross the tram line, was knocked down by the leading tub and killed instantly. Inspection and inquiry made.
224	11th October, 8 A.M.	Bejhi mine, Sunderchuck P. O., Bengal.	Equitable Coal Co., Ltd.	Coal	Piru Meah, (m), 49, <i>Set-rider.</i>	Coal	While assisting to re-rail a full tub on a haulage road, 7' x 6'6", deceased sustained injuries and died three and a half months later. Inspection and inquiry made.

Fatal accidents during the year 1939—*contd.*

Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
HAULAGE—<i>contd.</i>					
225 12th October, 4.30 a.m.	Loyabad mine, Hansjora P.O., Bihar.	Borakur Coal Co., Ltd.	Mongar Bhuiya, (m.), 20, <i>Tramway.</i>	Coal	While two loaded tubs were being hand hunted on a slope of 1 to 50 they got out of control. A trammer who was working at the top of a jig 400 feet away was struck and fatally injured by the runaway tubs. Inspection and inquiry made.
226 24th October, 5.15 a.m.	Jamuna mine, Chauranpur P.O., Bengal.	Equitable Coal Co., Ltd.	Benarsahi Tanti, (m.), 38, <i>Loader.</i>	Coal	While a train of empty tubs was being lowered down a haulage plane, dipping at 1 in 12, the two leading tubs became uncoupled, and ran wild. Deceased, who was sitting at the entrance to a tramming level, was struck and fatally injured. Inspection and inquiry made.
227 24th October, 2.30 p.m.	Raneapur mine, Disbargarh P.O., Bihar.	Equitable Coal Co., Ltd.	Walter Guillot, (m.), 45, <i>Stone-dusting Sinder.</i>	Coal	Deceased sat down on a riding trolley attached to a set of tubs which was being coupled up preparatory to being lowered down a haulage road. The haulage started with a severe jerk on the rope, throwing off deceased against the side, where he was crushed and run over by the following derailed tubs. Deceased was not authorised to ride on sets. Inspection and inquiry made.
228 31st October, 6 a.m.	Kichanda mine, Kolaria P.O., Bihar.	Raj Bahadur Lal, Ashmi Narain, Sukhani.	Bahian Gorai, (m.), 34, <i>Sinder.</i>	Mica	While a loaded skip was being hauled up a slope of 1 in 8, the D link pin attaching the rope to the tub broke, and the skip ran amain. Deceased, who was standing on the haulage plane, was struck and fatally injured. If a drag had been attached behind the ascending skip the accident would not have occurred. Inspection and inquiry made.
229 3th November, 11.30 a.m.	Pankisimula mine, Chauranpur P.O., Bengal.	Bengal Coal Co., Ltd.	Gurdeo Singh, (m.), 38, <i>Labourer.</i>	Coal	Four loaded tubs became uncoupled and ran amain on a haulage road, dipping at 1 in 10. Deceased, who was passing along the bottom of the road, was struck by the tubs and fatally injured. Inspection and inquiry made.

230	20th November, 9.30 P.M.	Argada mine, Argada P.O., Bihar.	Bengal Nagpur Railway Com- pany, Ltd.	Sohra, (m.), 29, Tramway.	Coal	While deceased was attaching a set of loaded tubs to an endless haulage rope by means of a screw clip, he lost his balance and fell on the track. He was dragged along with the set a distance of about 100 feet and sustained serious injuries to which he succumbed a few hours later. Inspection and inquiry made.
231	11th December, 11.20 A.M.	Hara Golai mine, Margherita P.O., Assam.	The Assam Rail- ways and Trading Company, Ltd.	Latha Banti, (m.), 27, Labourer.	Coal	While at work on a level haulage road deceased was knocked down and run over by a set of loaded tubs which was being hauled out of the mine. He received serious injuries which proved fatal a few hours later. Inspection and inquiry made.
232	11th December, 11 A.M.	Sodepur (Nos. 9 and 10 Pits) mine, Sunderbhab P.O., Bengal.	Bengal Coal Co. Ltd., Tramway.	Jugal Das, (m.), 30, Tramway.	Coal	Deceased was attempting to put a spring in one of a set of loaded tubs, which was gravitating down a slope of 1 in 15, when the tub overturned killing him instantly. Inspection and inquiry made.
233	22nd December, 2 P.M.	Kargall Mine, Dokaro P.O., Bihar.	State Railways, Coal Department	Kachra, (M.), 35, Labourer.	Coal	A set of four loaded tubs which was being lowered on sprags on a main loading line in a quarry dipping 1 in 50, ran into a branch loading line and struck an empty tub which was being loaded by deceased. The empty tub in turn struck deceased and inflicted fatal injuries. Inspection and enquiry made.

BY UNDERGROUND MACHINERY—(2 deaths).

234	29th September, 10 A.M.	Bhalsora mine, Jharia P.O., Bihar.	Bhalsora Coal Co. Ltd.	Sahab Ah Meah, (m.), 33, Machine driver.	Coal	Deceased was holding the anchor post of a chain coal cutting machine while it was being "sumped" in at the back of a gallery, when the post slipped and struck his head, inflicting fatal injuries. Inspection and inquiry made.
235	23rd November, 8.50 A.M.	Shivrajpur mine, Shivrajpur P.O., Bombay.	Shivrajpur Syndi- cate, Ltd.	Raghuo Fatch- singh, (m.), 40, Pumpman.	Man- ganes Ore.	While deceased was applying grease to the driving chain of a ram-pump, three fingers of his right hand were crushed. He developed Pneumonia and died nearly two months after the accident. Inspection and inquiry made.
236	4th January, 12 noon.	Seipur (Nos. 1, 2 & 3 Pits) mine, Kaltihari P.O., Bengal.	Lodina Colliery Co (1920), Ltd.	Hara Ram Kahar, (m.), 45, Labourer.	Coal	Deceased, who was suffering from Chronic Hernia, was lifting a lump of coal, 2' x 16" x 1", when he aggravated his complaint and he died 3 days later. Inspection and inquiry made.

SUNDRIES UNDERGROUND—(16 deaths).

Fatal Accidents during the year 1939—*contd.*

No.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks
SUNDRIES UNDERGROUND— <i>contd.</i>						
227	6th February, 5 P.M.	Patela mine, Nitya P. O., Bihar.	Bengal Coal Co., Ltd.	Baron Dhoib, (m.), 34, <i>Sirdar.</i>	Coal.	While walking down a haulage dip deceased slipped and fell on his stick, causing internal injuries to the abdomen to which he succumbed about 40 hours later. Inspection and inquiry made.
228	14th February, 4.15 P.M.	Sukhi mine, Sullip. O., Central Provinces	Raj Bahadur Seth Gowardhaodas.	Rhanghi, (m.), 45, <i>Miner.</i>	Mang- n- e- a- Ore.	Deceased accidentally fell into the disused part of a quarry, 60 feet deep, and was killed instantly. Inspection and inquiry made.
229	19th May, 3 A.M.	Rokaro mine, Bokaro P. O., Bihar.	East Indian Rail- way and Bengal Nagpur Railway.	Punil Ram Goro, (m.), 29, <i>Coal-cutter.</i>	Coal.	While deceased was striking a "wedge" with a hammer in the face of a quarry the wedge flew out and struck him on the leg. He died from hemorrhage a few minutes later. Inspec- tion and inquiry made.
230	29th May, 9.15 P.M.	Bhulanharwar mine, Patanahili P. O., Bihar.	Bhulanharwar Coal Co., Ltd.	Shahapada Ghosal, (m.), 39, <i>Sirdar.</i>	Coal.	While a prop 25 feet long was being erected in a depollaring area it got out of hand and fell, when it dislodged another prop which fell on a "bench" of floor coal. The lid of the second prop flew and struck deceased, who was supervising operations. He was seriously injured and died 24 days later. Inspection and inquiry made.
231	10th June, 5.45 A.M.	Shankargarth mine, Sanargarth P. O., United Provinces.	Gorind Sindhi.	Daranth, (m.), 35, <i>Labourer.</i>	Stono.	Deceased was removing stones which had been blasted from the face of a quarry, when a large boulder rolled down and struck him. He sustained serious injuries to which he suc- cumbed 36 hours later. Inspection and inquiry made.
232	11th July, 6.30 P.M.	Jhandewala mine, Delhi P. O., Delhi.	Public Department.	Udhia, (m.), 30, <i>Stone-cutter.</i>	Stono.	While levering down a mass of stone in an open excavation from a height of 5 feet, deceased lost his balance and fell down, and immediately afterwards the mass of stone fell and injured him fatally. Inspection and inquiry made.

213	15th July. 11 P. M.	Mosaboni mine, Ghatila P. O., Bihar	Indian Corporation, Ltd.	Copper	Pasang Lama, (m), 28, Labourer	Copper	While deceased was coming down a slope, a mass of stone 6' 6" thick, which lay on the foot wall, rolled down and struck him, causing serious injuries which proved fatal 5 days later. Inspection and inquiry made
214	26th August. 6 A. M.	Bepith mine, Sunderbakh P. O., Bengal.	Equitable Co., Ltd.	Coal	Jagadeh Tun, (m), 25, Coal-cutter	Coal	While deceased was carrying a large lump of coal along a bench 3 feet wide, out in a pillar under extraction, he slipped and fell, sustaining internal injuries which proved fatal two days later. Inspection and inquiry made
215	26th September, 3 15 P. M.	Bokaro mine, Bokaro P. O., Bihar	East Indian Railway and Bengal Nagpur Railway.	Coal	Mongra Mahi, (m), 35, Coal-cutter	Coal	While working on the top "bench" of a quarry, deceased overbalanced and fell to the second "bench", through a height of about 20 feet. He sustained serious injuries and died half an hour later. Inspection and inquiry made
216	2nd October. 7 P. M.	Barngolai mine, Mazherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Coal	Sherafal Pathan, (m), 30, Coal puller.	Coal	While deceased with five other persons was pulling coal and earth from an "opening", sloping at 1 in 2, a large mass of earth rolled down and struck deceased, killing him on the spot. Inspection and inquiry made.
217	29th October, 10 15 A. M.	Shivrajpur mine, Shivrajpur P. O., Bom bay.	Shivrajpur Syndi- cate, Ltd.	Manga- nese	Rama Kala, (m), 40, Miner	Manga- nese	Deceased was dressing loose stones in an opencast working by standing on a cradle 35 feet above the ground when a stone 12" x 12" x 10" struck one of the ropes supporting the cradle causing it to swing. He lost his balance, fell off the cradle and sustained fatal injuries. Inspection and inquiry made
218	2nd November, 1 30 P. M.	Khas Jorjampur mine, Jharra P. O., Bihar.	Seth Tatachand Ghanshyamdas.	Coal	Prasadi Bhulya, (m), 28, Labourer.	Coal	Deceased was engaged in loading coal from a heap of coal about 8 feet in height in a gallery, when a lump of coal, measuring about 1'6" x 1'3" x 1', rolled down from the top of the heap and struck him. He sustained serious injuries and died about two hours later. Inspection and inquiry made
219	23rd December, 6 P. M.	Wethand mine, Sitarampur P. O., Bengal.	Akh Coal Co., Ltd.	Coal	Bhagurath Mahato, (m), 35, Dola Singh, (m), 31, Drillers.	Coal	In a level gallery, a brattice cloth caught fire from an unknown source. In attempting to escape from the face of the gallery, two drillers were severely burnt and they succumbed to their injuries three days later. Inspection and inquiry made.
220	24th December, 6 15 A. M.	Jamuria (Nos. 7 and 8 Pits) mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Coal	Mangoo Keyot, (m), 52, Coal-cutter.	Coal	In a depulping area, deceased was struck and killed instantly by a prop, 11 feet long, which had been loosened during blast- ing operations and was dislodged by a minor filling heavily against it. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1939—contd.

Date and hour of accident.	Name and situation of mine.	Name of owner	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks
221 5th January, 9 A.M.	Real Raniganj mine, Raniganj P. O., Bengal.	Real Raniganj Coal Co., Ltd.	Moharaj Tewari (alias Chatter Tewari), (m), 47, Labourer.	Coal	A small electric generator was being driven by a steam engine when the driving pulley on the transmission shaft collapsed and the broken parts were projected in to the air. Deceased, who was working near a put top 50 feet away, was struck by one of the projected pieces of metal and received serious injuries to which he succumbed shortly afterwards. Inspection and inquiry made.
222 19th April, 1 P.M.	Baragol mine, Macherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Nandlal Chetri, (m), 51, Pan attendant.	Coal	Deceased was found dead underneath a belt driving a fan. It is presumed that he climbed on the engine, when he slipped and fell on to the moving belt. He was killed instantly. Inspection and inquiry made.
223 12th February, 8.30 P.M.	Jamuna (A. and B. Pits) mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Jhaji Shaw, (m), 40, Labourer.	Coal	While wagons were being shunted on a railway siding deceased attempted to pass between two wagons. He was crushed between the buffers and fatally injured. Inspection and inquiry made.
224 23rd March, 4.15 P.M.	Madhuband mine, Naulkharke P. O., Bihar.	Karamchand Thapar and Brothers, Ltd.	Sunil Kumar Paul, (m), 25, Labourer.	Coal	Deceased was standing on a wall trying to operate the brake of a wagon with his foot when he slipped and fell on the line. He was run over by the wagon and sustained serious injuries to which he succumbed 5 hours later. Inspection and inquiry made.

255	25th May, 5 P.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Co., Ltd.	Coal	Kara Baunia, (f.), 16, Labourer	Coal	Deceased was run over by a moving wagon in a siding and sustained injuries which proved fatal 42 hours later. Inspection and inquiry made.
256	30th May, 5 30 P.M.	Domarkhar mine, Dargan P. O., Bihar.	Stone Ltd	Suppliers,	Ramoh, (m.), 44, Tramway	Limestone.	Deceased, with another trammer, was pushing a loaded tub on a surface tram line, when he slipped and his right heel was injured by a wheel of the tub. He died from Septicæmia about 6 weeks later. Inspection and inquiry made.
257	13th June, 3.15 P.M.	New Marine mine, Kusayda P. O., Bihar	New Marine Co., Ltd.	Coal	Patri Mallan, (f.), 50, Labourer.	Coal	While wagons were being hand shunted on a railway siding, deceased, who was unaware of the shunting operations, took shelter from rain beneath one of the stationary wagons. In attempting to get from beneath the wagon when it was set in motion, she was run over and received serious injuries to which she succumbed some 40 minutes later. Inspection and inquiry made.
258	21st June, 11.45 A.M.	Dongri Buzurg mine, Goberwahli P. O., Central Provinces	Central Provinces Manganese Co., Ltd.	Manganese Ore	Talal Gowara, (f.), 25, Labourer.	Manganese Ore	While a loaded tipping tub was being pushed along a tram-line, 12 feet above the ground, the tub accidentally got derailed and fell down to the ground. Deceased was struck by the tub and killed instantly. Inspection and inquiry made.
259	15th August, 9.30 P.M.	Chandametta mine, Parasia P. O., Central Provinces	Tench Valley Coal Co., Ltd.	Coal	Amarchand Mehra, (m.), 30, Tramway.	Coal	While deceased was assisting to hand-shunt a loaded wagon under a screening plant, he accidentally slipped and was run over, sustaining injuries which proved fatal shortly after. Inspection and inquiry made.
260	13th October, 4 A.M.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Co., Ltd.	Coal	Mati Mejian, (f.), 50, Labourer.	Coal	While deceased was cleaning up fallen coal near a loaded wagon standing under a screening plant an empty wagon bumped into it. Deceased was knocked down and sustained injuries which proved fatal five hours later. Inspection and inquiry made.
261	14th December, 7 55 P. M.	Ghorawari mine, Jumardoo P. O., Central Provinces	Kiradgarh Collieries, Ltd	Coal	Kaya Mehra, (m.), 23, Tramway.	Coal	While deceased was pushing a loaded tub on a gradient of 1 in 80 on to a tippler, his foot was caught in the rails of a crossing. He was run over by a following tub before he could release himself and sustained injuries which proved fatal shortly after. Inspection and inquiry made.
	20th December, 7 40 P. M.	Dharmo Main mine, Sitarampur P. O., Bengal.	Dharmo Main Coal Co., Ltd.	Coal	Sona Bauri, (m.), 25, Tramway.	Coal	While pulling a loaded tub along a level tramming road a wheel of the tub passed over his left foot. Tetanus superseeded and he died two days later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1939—*contd.*

Date of accident	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed	Name of mineral worked	Cause of accident and remarks.
ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—<i>contd.</i>					
23 11th December, 1939	Remagnette mine, Holt P. O., Lancs.	Herald Iron Co. Ltd. (in voluntary liquidation)	Sachu Mucha (m.), Surface railwayman.	Coal	Deceased was attempting to couple a locomotive to a set of loaded tubs when his head was crushed. He was killed almost instantly. Inspection and inquiry made.
23 13th September, 1939	Amalabad mine, Jedgore P. O., Bihar.	Eastern Coal Co., Ltd.	Sudharan Rajwar, (m.), Tramway.	Coal	Deceased was attempting to raise a derailed tub on to the rails. He had one foot on the (tugger) haulage rope attached to the tub and his hands on the latter when he crept out and staggered, as a result of an electric shock which proved fatal. The haulage attendant who went to work the tugger also received a shock while closing the switch.
23 21st March, 1939	Sondra mine, Bangor P. O., Bihar.	Sondra Coal Co., Ltd.	Bharwar Bauri, (m.), Earth cutter.	Coal	The system was 550 volts, 3 phase, A. C. with the neutral point insulated. Inspection and inquiry made.
23 21st March, 1939	Sondra mine, Bangor P. O., Bihar.	Sondra Coal Co., Ltd.	Bharwar Bauri, (m.), Earth cutter.	Coal	Deceased was engaged in cutting earth from the side of an old embankment about 6 feet high, when a mass of soil fell and buried him. He was seriously injured and died four hours later. Inspection and inquiry made.
23 25th December, 1939	Lohra mine, Jharia P. O., Bihar.	New Standard Coal Co., Ltd.	Kusum Harin, (f.), Labourer.	Coal	Deceased assisted by another woman was carrying a prop 15 feet long and 6" diameter when she got tired and tried to adjust the prop on her head. The prop slipped and fell on her right shoulder, causing a spinal injury which proved fatal 58 hours later. Inspection and inquiry made.

Serial number	Date and hour of accident	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Reason for extinction.	Cause of accident and remarks
FATAL ACCIDENTS NOT INCLUDED IN THE STATISTICS—(18 deaths)							
1	22nd March, 12 Noon.	Dihergarh mine, Dihergarh P. O., Bengal.	Equitable Co., Ltd.	Coal. Nani Meohan, (J.), 65, Not employed	Coal	Not a mining accident.	While deceased was digging earth in a small excavation on the side of a bullock, she was partially buried by a mass of earth which fell from the side and fatally injured. Inspection and inquiry made
2	22nd March, 10 30 P. M.	South Panara mine, Jinnordeo P. O., Central Provins. crs.	Budhoolal Jagannath	Coal. Damroo Mehra, (m.), 55, Labourer.	Coal	Not a mining accident.	Deceased with his family was sleeping in a dwelling under construction, when a partition wall suddenly collapsed. Deceased was buried by the debris and received fatal injuries. Inspection and inquiry made
3	10th April, 1 30 P. M.	Shampore mine, Niralochati P. O., Bihar.	Shampore Coal Co. Ltd.	Coal. Mangroo Bauri, (m.), 45, Peep maso.	Coal	Not a mining accident.	Deceased was found dead in a dip gallery containing 1½ feet of water. Inspection and inquiry made.
4	30th April, 11 15 A. M.	Mudildah mine, Sujna P. O., Bihar.	Barrakur Coal Co. Ltd.	Coal. Fatah Khan, (m.), 48, Deep Chaprasi.	Coal	Not a mining accident.	While wagons were being shunted on a colliery siding, deceased, who was either sitting under the shade of the last wagon or attempting to cross the line, was caught between one of the buffers of the last wagon and the end buffer of the siding. He received serious internal injuries and died 1½ hours later. Inspection and inquiry made
5	25th May, 1.45 P. M.	Kajforn mine, Kajforngram P. O., Bengal.	Roy Dutta & Co.	Coal. Jugal Ankura, (m.), 45; Chaitu Majhi, (m.), 20, Raghu Mucha, (m.), 25; Labourers.	Coal	Not a mining accident.	During a storm four persons took shelter behind the supporting walls of an overhead tank, when the walls collapsed. The deceased were killed instantly and the other person received serious injuries. Inspection and inquiry made

11	11th October, 10.30 A.M.	Pondich mine, Sunderbark P.O., Bengal.	Bengal Coal Co., Ltd.	Koka (Majal), (m), 30. <i>Coal-cutter.</i>	East	Coal	Not a mining accu- dent.	While bathing in a tank, which was regularly used for bathing purposes, deceased fell an epileptic fit and was drowned. Ins- pection and inquiry made.
12	26th Novem- ber, 11.30 A.M.	Machhind mine, Nulkburke P.O., Bihar.	Karamchand & Thapar Bro., Ltd	Ram Das Beldar, (m), 18. <i>Labourer.</i>	Coal	Coal	Not a mining accu- dent.	Deceased was found drowned in shallow water near the entrance to an abandoned incline. He was subject to epileptic fits and it is presumed that during a fit he fell with his head in the water and was suffocated. Inspection and inquiry made.
13	24th December, 4.30 A.M.	Gua Mine, Gua P.O., Bihar.	Indian Iron & Steel Co., Ltd	Bagon Ho, (m), 22. <i>Sawyer.</i>	Iron ore	Iron ore	Not a mining accu- dent.	Deceased was sawing a tree at the foot of a hill when a mass of stone about 1 foot in diameter rolled down the side and struck him, causing serious injuries which proved fatal a few hours later. It was presumed that the stone was dislodged by some goats which were seen grazing on the slope of the hill. Ins- pection and enquiry made.
14	20th Decem- ber, 7 A.M.	Ghorawari mine, Ghorawari P.O., Central Provinces	Kiridaggarh Collieries Ltd.	Unknown. (m), 22. <i>m.</i>	Coal	Coal	Not employ- ed.	Deceased was run over by a locomotive on a surface tramline and sustained fatal injuries. Inspection and inquiry made.
15	22nd Decem- ber, About 3 P.M.	Chasalla mine, Patardih P.O., Bihar.	Indian Iron & Steel Co., Ltd.	Raghu Mondal, (m), 60. <i>Not employed.</i>	Coal	Coal	Not employ- ed.	While deceased was undercutting coal in a disused quarry, a mass of coal, about 8'x6'x1'6" fell on him from the side and killed him instantly. Inspection and inquiry made.
16	21th Decem- ber, 10 P.M.	Sanku Mandarhoni mine, Panlavewar P.O., Bengal.	Sanku Man- darhoni Colliery Co.	Jivan Khoyra, (m), 35. <i>Coal-cutter.</i>	Coal	Coal	Not a mining accu- dent.	Deceased was sleeping in his hut when his clothing was set on fire by a lamp and he was severely burnt. Inquestum super- vened from which he died 16 days later. Inspection and inquiry made.

Table

Statement of fatal and serious accidents in and about Mines

Province.	District and Mineral field	Number of separate fatal accidents	FATAL					
			NUMBER OF DEATHS					
			Under-ground	Open workings.		Surface		Total
			Males.	Males.	Females.	Males.	Females.	
Assam . . .	Lakhimpur Makum Coalfield.	9	8	.	.	1	.	CO 9
Bengal (and part of Bihar) .	Raniganj Coalfield . .	94	97	.	.	4	2	103
Bihar	Jharia Coalfield . . .	85	84	1	1	5	2	93
	Bokaro " . . .	8	4	3	1	.	..	8
	Karampura " . . .	1	..	1	.	..	..	1
	Ghindh " . . .	7	8	.	.	.	..	8
	Jamtty " . . .	..	..	.	.	..	..	.
	Palamau " . . .	1	1	.	.	.	..	1
Central Provinces . . .	Chanda	3	3	..	.	..	..	3
	Chhindwara-Pench Valley Coalfield	15	14	..	.	2	.	16
	Yectmal	1	1	..	..	..	.	1
Orissa	Sambalpur—Hingir Rampur Coalfield	.	..	..	..	.	..	.
Punjab	Salt Range Coalfield . .	5	6	.	..	.	.	6
Total (Coal) . .		229	226	5	2	12	4	249

No. 2

regulated by the Indian Mines Act, during the year 1939

ACCIDENTS.					SERIOUS ACCIDENTS									
DEATH RATE PER 1,000 PERSONS EMPLOYED				Number of separate serious accidents	NUMBER OF PERSONS SPECIALLY INJURED						SERIOUS INJURY RATE PER 1,000 PERSONS EMPLOYED			
Underground	Open workings	Surface	Underground, open workings and surface.		Underground	Open workings		Surface.		Total	Underground	Open workings	Surface.	Underground, open workings and surface.
					Males	Males	Females	Males	Females					
AL														
5.65		1.78	4.51	103	94			9		103	68.70		15.90	51.53
2.11		0.24	1.50	353	297			57	7	361	6.45	.	2.97	5.26
1.53	0.49	2.39	1.03	462	361	5		00	12	469	6.57	1.22	3.46	5.30
1.26	0.37		0.63	52	14	22	7	8	1	52	4.42	4.14	3.68	4.12
	0.67		0.25	9	4	.		5	..	9	2.72	.	4.74	2.24
1.63			1.26	101	93			7	1	101	18.03	.	5.53	15.85
				1	..			1	..	1	.	..	3.65	1.42
10.00			5.64	.	.		..		..		..	.	.	..
1.41			1.06	12	12	.	.	.		12	5.65	.	.	4.23
1.98	.	0.59	1.39	59	40	2	1	15	2	60	5.65	2.94	5.01	5.22
2.97			2.21			.	.	.	..	.	.	..	..	..
				2	2	..	.	..	..	2	6.74	.	..	3.47
3.43			2.11	7	7	.	.	1	..	8	4.00	..	0.94	2.81
1.81	0.47	0.26	1.23	1,151	924	29	8	193	23	1,177	7.41	1.82		

Table

Statement of fatal and serious accidents in and about Mines

Province	District and Mineral Field	Number of separate fatal accidents	TOTAL					
			NUMBER OF DEATHS					Total.
			Under-ground.	Open workings		Surface		
			Males.	Males	Females	Males	Females	
Bihar	Singbhum	1			1			IRON 1
Bombay	Panch Mahals	3	12	1		..	..	MAN 3
Central Provinces	Belaghat	3	1	2				3
	Bhandara	1	..				1	1
	Nasipur	..						..
	Total (Manganese Ore)	7	3	3		..	1	7
Baluchistan	Upper Zhob	2		2				CHROMITE 2
Bihar	Singbhum	1	1					COFFER 1
Bihar	Gaya						..	MI ..
	Hazaribagh	10	5	2	..			10
	Monohyr	1	..	1	..			1
Madras	Nellore	1	1			..		1
Rajputana	Ajmer-Merwara	1	1	..	..		..	1
	Total (Mica)	13	10	3	..	..	..	13

DIX II—contd.

No. 2—contd.

regulated by the Indian Mines Act, during the year 1939—contd.

ACCIDENTS					SERIOUS ACCIDENTS										
DEATH RATE PER 1,000 PERSONS EMPLOYED				Number of separate serious accidents	NUMBER OF PERSONS SERIOUSLY INJURED						SERIOUS INJURY RATE PER 1,000 PERSONS EMPLOYED				
Underground	Open workings	Surface	Underground, open workings and surface		Underground	Open workings		Surface		Total	Underground	Open workings	Surface	Underground, open workings and surface	
						Males	Males	Females	Males						Females
ORE															
-	0.14		0.11	21		4	2	12	3	21		0.83	9.12	2.38	
GANESE ORE															
9.78	1.03		1.71	10	7	2		3		12	34.15	2.07	5.14	6.83	
1.76	0.25		0.27	20	4	4	2	5	5	20	7.04	0.73	4.10	1.81	
		1.65	0.23	18		2	1	7	8	18		0.80	24.75	4.06	
				4	1		1	2		4	5.49	0.18	2.93	0.65	
2.90	0.14	0.21	0.25	52	12	8	4	17	13	51	11.85	0.55	6.85	1.07	
ORE															
-	17.34		7.58	1	..	1		..	.	1	..	8.62	..	3.79	
ORE.															
0.54	-	.	0.32	67	60	..	..	11	..	71	32.57	..	8.85	23.01
CA															
	-	..		2	3	.	..	..	..	3	1.34	..	..	0.84
0.65	0.60	.	0.53	20	16	4	.	3	..	25	1.46	1.21	0.93	1.33	
	4.08		0.73	..	-	..	..	..		.	..	..	..	..
0.45	.		0.15	1	2	..	..	..	..	2	0.90	..	..	0.50
4.73	..	..	0.79	..	..	..	..	..	..	..	..	..	-	..
0.56	0.34	..	0.40	23	23	4	..	3	.	30	1.29	0.51	0.47	0.93	

Table

Statement of fatal and serious accidents in and about Mines

Province	District and Mineral field	FATAL					
		Number of separate fatal accidents.	NUMBER OF DEATHS				
			Under-ground	Open workings.		Surface	Total
			Males.	Males	Females.	Males Females	
Punjab	Jhelum	10	60	..	..	..	60
	Mianwali . . . . .	..	..	..	..	..	..
	Shahpur . . . . .	..	..	..	..	..	..
	Total (Salt)	10	60	..	..	..	60
Madras	Salem . . . . .	..	..	..	..	..	..
Punjab	Kangra	1	..	1	..	..	1
Bihar	Shahabad	3	..	10	..	1	3
Central Provinces	Jubbulpore . . . . .	..	..	..	..	..	..
Madras	Coimbatore . . . . .	..	..	..	..	..	..
Punjab	Attock	1	..	1	..	..	1
	Mianwali	1	..	1	..	..	1
	Rawalpindi . . . . .	..	..	..	..	..	..
	Total (Limestone)	5	..	4	..	1	5

DIX II—contd

No. 2—contd.

regulated by the Indian Mines Act, during the year 1939—contd.

ACCIDENTS					SERIOUS ACCIDENTS											
DEATH RATE PER 1,000 PERSONS EMPLOYED					Number of separate serious accidents	NUMBER OF PERSONS SERIOUSLY INJURED						SERIOUS INJURY RATE PER 1,000 PERSONS EMPLOYED				
Underground	Open workings	Surface	Underground, open workings and surface	Under ground		Open workings		Surface		Total	Underground	Open workings	Surface	Underground, open workings and surface		
				Males		Females	Males	Females	Males						Females	
LT																
303			202	11	8			3		11	12.21	..	9.40	11.09		
.	.			4	12			12		4	17.34	..	25.97	20.73		
.				12	12					12	18.79	.	..	9.68		
218			144	17	12	.		5		17	13.10	..	10.03	12.21		
WESITE				1	.	.		1	.	1	.	.	5.29	0.36		
TE																
	2.52		2.47	1		1	..	.	..	1	.	2.52	..	2.47
STONE																
.	0.84	1.01	1.07	4		1	.	3	..	4	..	0.44	5.74	1.43		
..			.	8	..	5	3	..	..	8	..	3.16	.	3.09
..				1	..	.	1	.	.	1	..	2.06	..	2.04		
.	2.24	.	2.24	7	.	7		.	.	7	.	15.09	..	15.66		
..	4.67		4.67	..	.	..	..	.	..	..	.	..	..	..
..	.	.	.	1	..	1	..	..	..	1	..	33.33	..	32.26
..	0.61	1.40	0.69	21	..	14	4	3	..	21	..	2.78	4.29	2.90		

Table

Statement of fatal and serious accidents in and about Mines

Province	District and Mineral Field.	Number of separate fatal accidents.	FATAL					
			NUMBER OF DEATHS					
			Under-ground.	Open workings		Surface		Total
			Males	Males	Females.	Males	Females	
Bihar	Gaya	1	..	1	.	.	..	ST 1
	Santal Parganas . . . . .	.	.	.	..	.	..	..
	Singhbhum . . . . .	..	.	.	..	..	..	.
Bombay	Katra	1	..	1	.	..	..	1
Delhi	Delhi	1	..	1	..	..	..	1
Madras	Chingleput . . . . .	..	..	..	..	..	..	..
	Guntur . . . . .	..	..	..	..	..	..	..
United Provinces	Allahabad	1	..	1	..	..	..	1
	Total (Stone)	4	..	4	..	..	..	4
Bengal	Burdwan	1	..	1	..	..	..	FIRE 1
Bihar	Singhbhum . . . . .	..	..	..	..	..	..	..
Bengal	Burdwan . . . . .	..	..	..	..	..	..	CL ..
	Grand Total (All Minerals)	266	242	23	3	13	5	266

DIX II—contd.

No. 2—concl'd

regulated by the Indian Mines Act, during the year 1939—concl'd.

ACCIDENTS					SERIOUS ACCIDENTS									
DEATH RATE PER 1,000 PERSONS EMPLOYED				Number of separate serious accidents	NUMBER OF PERSONS SERIOUSLY INJURED						SERIOUS INJURY RATE PER 1,000 PERSONS EMPLOYED			
Underground.	Open workings	Surface.	Underground, open workings and surface		Underground	Open workings		Surface		Total	Underground.	Open workings.	Surface	Underground, open workings and surface.
						Males	Males	Females	Males						Females
ONE.														
..	1 39	..	1 39	1	..	..	1	..	..	1	..	1 39	..	1 39
..	..	..	..	1	..	1	..	..	..	1	..	0 60	..	0 34
..	..	..	..	1	..	1	..	..	..	1	..	0 75	..	0 71
..	68 32	..	22 22	..	..	..	..	..	..	..	..	..	..	..
..	0 83	..	0 83	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	7	..	4	1	2	..	7	..	4 80	15 15	5 75
..	..	..	..	1	..	1	..	..	..	1	..	8 06	..	8 06
..	1 07	..	1 05	1	..	2	..	..	..	2	..	2 14	..	2 11
..	0 18	..	0 29	12	..	9	2	2	..	13	..	0 99	0 75	0 95
CLAY.														
..	12 35	..	7 25	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	2	..	1	..	1	..	2	..	0 99	1 69	1 25
AY.														
..	..	..	..	1	..	1	..	..	..	1	..	8 33	..	8 06
1 85	0 34	0 22	0 94	1,380	1,035	72	29	244	39	1,610	7 05	1 20		

APPENDIX II—concl'd.

Table No. 3.

Statement of fatal accidents in Mines regulated by the Indian Mines Act, during the year 1939, classified according to cause of accident.

Mineral worked	Number of separate accidents	Number of persons killed.											Death rate per 1,000 persons employed			
		Falls of roof	Falls of sides	In shafts	Suffocation by gases	By explosives	By irrigation of water	Haulage	Miscellaneous underground	Electricity	Surface	Total deaths	Underground.	Open workings	Surface	Underground, open workings and surface.
Coal . . .	229	91	71	10	1	11		39	12	1	13	240	1 81	0 47	0 26	1 23
Iron Ore . .	1		1									1		0 14	..	0 11
Manganese Ore .	7	2	1						3		1	7	2 06	0 14	0 21	0 25
Chromite Ore .	2		2	..						..	..	2	..	17 24	..	7 88
Copper Ore . .	1								1	..	..	1	0 54		..	0 32
Mica . . .	13	1	5	4		12		1		..		13	0 56	0 38		0 40
Salt . . .	2	1				1	..		..	..	..	2	2 18	..	..	1 44
Slate . . .	1	..	1				..	..	..			1		2 52	..	2 47
Limestone . .	5	..	2			2		..			1	5	..	0 61	1 10	0 69
Stone . . .	4		1			1			12		..	4	..	0 36	..	0 29
Fireclay . . .	1		1	..							..	1	..	12 35	..	7 25
Total for 1939 .	266	95	85	14	1	17		40	19	1	15	246	1 85	0 34	0 22	0 94
Total for previous year.	214	101	62	15		10	2	40	26		24	241	1 66	0 29	0 22	0 62
Inference . .	+14	-9	+23	-1	+1	+7	-2		-8	+1	-9	+3	-0 01	+0 05	-0 10	+0 02

APPENDIX III.

Statement of prosecutions under the Indian Mines Act, during the year 1939.

Province	District	Number of prosecutions.	Number of persons prosecuted	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened	REMARKS.
Assam	Margherita	1	1	1	Regulations 116 A(a), 140, 146 of the Indian Coal Mines Regulations, 1926 and Bye-law 16 made under Section 32 of the Indian Mines Act, 1923.	
	Burdwan	1	1	...	Regulation 137(2) of the Indian Coal Mines Regulations, 1926 and Rule 18 of the rules made by the Bengal Government under Section 30 of the Indian Mines Act, 1923.	The case was withdrawn.
	Do	1	4	4	Order under Section 19 (1-A) of the Indian Mines Act, 1923 and Regulations 144 and 140 of the Indian Coal Mines Regulations, 1926 and Bye-law 95 made under Section 32 of the Indian Mines Act, 1923.	
	Do	1	1	1	Section 28 of the Indian Mines Act, 1923, read with Rule 9 of the rules made by the Bengal Government under Section 30 of the Indian Mines Act, 1923, Regulations 69(2) and 70(2) of the Indian Coal Mines Regulations, 1926.	
Bengal	Do.	1	2	2	Section 15 of the Indian Mines Act, 1923, read with Regulations 23 and 24 of the Indian Coal Mines Regulations, 1926	
	Do	1	7	6	Regulations 74, 87(c) and 137(2) of the Indian Coal Mines Regulations, 1926.	One of the accused acquitted.
	Do	1	2	2	Regulation 38 of the Indian Coal Mines Regulations, 1926.	
	Bankura	1	1	1	Section 15 of the Indian Mines Act, 1923, read with Regulation 23 of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—*contd.*Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bengal — <i>contd.</i>	Burdwan	1	2	2	Regulations 137 and 140 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulations 137(2) of the Indian Coal Mines Regulations, 1926 and Rule 18 of the rules made by the Bengal Government under Section 30 of the Indian Mines Act, 1923.	
	Do.	1	1	1	Section 15(1) and (2) of the Indian Mines Act, 1923.	
	Do.	1	2	2	Section 19 (1-A) of the Indian Mines Act, 1923. Regulations 121 and 146 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	..	Regulation 3(3) of the Indian Coal Mines Regulations, 1926.	Case dropped as the summons could not be served, the accused, being in a native state.
	Do.	2	2	1	Section 35(c) of the Indian Mines Act, 1923.	Case against one of the accused is pending.
	Do.	1	1	..	Regulation 82 of the Indian Coal Mines Regulations, 1926 and Bye law 9 made under Section 32 of the Indian Mines Act, 1923 read with Regulation 58(e) IV of the Indian Coal Mines Regulations, 1926.	Acquitted.
	Do.	1	1	1	Regulation 97(2) of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—*contd.*Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened	REMARKS.
Bihar	Manbhum .	1	10	2	Order under Section 19 (1-A) of the Indian Mines Act, 1923, Section 22C of the Indian Mines Act, 1923 and Regulation 149 of the Indian Coal Mines Regulations, 1926 and Rule 9 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923	Three of the accused acquitted and case was dropped against five of the accused.
	Do .	1	3	3	Order under Section 19 (1-A) of the Indian Mines Act, 1923.	.
	Do .	1	2	2	Regulation 146 of the Indian Coal Mines Regulations, 1926	
	Do .	1	2	2	Regulation 13 of the Indian Coal Mines Regulations, 1926	
	Do .	1	1	1	Regulations 137(1) and (2) of the Indian Coal Mines Regulations, 1926, and Rule 17 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923	
	Do .	1	2	2	Bye-law 48 read with Bye-law 31 of the Bye-laws made under Section 30 of the Indian Mines Act, 1923 and Rule 9-A of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, read with Section 23(4) of the Indian Mines Act, 1923.	
	Do .	1	1	..	Regulation 137 of the Indian Coal Mines Regulations, 1926	The case is pending

APPENDIX III—*contd.*Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bihar— <i>contd.</i>	Manbhum .	1	2	2	Regulations 78 (2), 137 and 15 of the Indian Coal Mines Regulations, 1926.	
	Do .	1	1	1	Regulations 58(k) and 137 of the Indian Coal Mines Regulations, 1926	
	Do .	1	1	1	Regulation 75 of the Indian Coal Mines Regulations, 1926, Section 23 (1) and (3) of the Indian Mines Act, 1923, read with Rule 9, Rule 8 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulation 137 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	8	8	Regulations 145 and 149 of the Indian Coal Mines Regulations, 1926	
	Do. .	1	2	1	Regulations 145 of the Indian Coal Mines Regulations, 1926.	Case against one of the accused dropped, as he absconded
	Do. .	1	2	..	Bye-law 8 of the Bye-laws made under Section 32 of the Indian Mines Act, 1923.	The case is pending.
	Do. .	1	2	2	Regulation 137 of the Indian Coal Mines Regulations, 1926 and rule 8 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	

APPENDIX III—*contd.*Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province	District	Number of prosecutions	Number of persons prosecuted	Number of persons convicted	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bihar— <i>contd.</i>	Monghyr	1	2	2	Regulations 48, 54, 41, 42 and 46 of the Indian Metalliferous Mines Regulations, 1926	
	Hazaribagh	1	2	2	Section 26-A of the Indian Mines Act, 1923 read with Rule 17 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, Section 28 (1) of the Indian Mines Act, 1923 read with Rule 9 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulation 38 of the Indian Metalliferous Mines Regulations, 1926.	
	Do	1	2	2	Section 26-A of the Indian Mines Act, 1923 read with Rule 17 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, Regulation 54 of the Indian Metalliferous Mines Regulations, 1926 and Rule 8 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Monghyr	1	3	3	Section 26 read with Section 3 (c) of the Indian Mines Act, 1923, Regulations 16, 48 read with Regulation 44 of the Indian Metalliferous Mines Regulations, 1926 and Rule 8 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	

APPENDIX III—*contd.*Statement of prosecutions under the Indian Mines Act, during the year 1939—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened	REMARKS.
Bihar— <i>contd.</i>	Manbhum .	1	9	4	Section 35 (e) of the Indian Mines Act, 1923	One of the accused was acquitted, one died and the case against the other three was dropped as they were untraced.
	Gaya . .	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	
	Do. . .	1	1	..	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926	The accused was acquitted.
	Monghyr .	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	
	Singbhum .	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	
	Manbhum .	1	3	..	Regulation 3(3) of the Indian Coal Mines Regulations, 1926.	The case was withdrawn.
	Do. . .	1	1	1	Section 35(e) of the Indian Mines Act, 1923.	
	Hazaribagh .	1	1	..	Regulations 72, 64(3) and 71 of the Indian Metalliferous Mines Regulations, 1926.	The accused was acquitted.
	Do. . .	1	2	2	Regulations, 43(1), 38 and 46 of the Indian Metalliferous Mines Regulations, 1926 and Rules 8 and 15 of the rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	

APPENDIX III—*contd.*

Statement of prosecutions under the Indian Mines Act, during the year 1939
—*contd*

Province	District	Number of prosecutions	Number of persons prosecuted	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bihar— <i>conold.</i>	Manbhum	1	1	1	Section 15 of the Indian Mines Act, 1923 read with Regulations 23 and 24 and Regulation 70(2) read with Regulation 71 of the Indian Coal Mines Regulations, 1926.	
	Do	1	1	..	Regulation 17 of the Indian Coal Mines Regulations, 1926.	The case is pending.
	Santhal Parganas	1	4	..	Section 15 of the Indian Mines Act, 1923, read with Regulation 23 of the Indian Coal Mines Regulations, 1926.	The case is pending.
	Chhindwara	1	2	2	Regulations 66(2) and 146 of the Indian Coal Mines Regulations, 1926 and Bye-law 61 of the Bye-laws made under section 32 of the Indian Mines Act, 1923.	
Central Provinces.	Jubbulpur	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	
	Chhindwara	1	1	1	Bye-law 41 of the Bye-laws made under section 32 of the Indian Mines Act, 1923.	
	Do.	1	2	2	Regulations 95(2) and 143 and 148 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulation 117 of the Indian Coal Mines Regulations, 1926	
	Do	1	1	1	Regulation 146 of the Indian Coal Mines Regulations, 1926.	

APPENDIX III—*concl.*

Statement of prosecutions under the Indian Mines Act, during the year 1939
—*concl.*

Province	District	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened	REMARKS.
Central Provinces. — <i>concl.</i>	Chhindwara	1	1	1	Regulations 109 and 110 of the Indian Coal Mines Regulations, 1926	
	Do	2	4	1	Regulation 145 of the Indian Coal Mines Regulations, 1926	The three accused were acquitted.
	Do	3	4	4	Bye-law 8 of the Bye-laws made under Section 32 of the Indian Mines Act, 1923.	
	Do	3	3	3	Regulations 109, 110 and 117 of the Indian Coal Mines Regulations, 1926.	
	Do	1	1	..	Regulations 106 and 145 of the Indian Coal Mines Regulations, 1926.	Complaint dismissed under Section 204 Criminal Procedure Code.
	Do.	1	1	1	Regulations 116 of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulation 70(3) (5) of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	1	Regulations 142 and 147 of the Indian Coal Mines Regulations, 1926.	
Punjab	Gurgaon	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926	
	Allahabad	1	1	1	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926	
	Do.	1	2	..	Section 41 of the Indian Mines Act, 1923.	

APPENDIX IV.

Miscellaneous.

Statement No. 1.

LIST OF INSPECTION CIRCLE

No. 1 Circle

No. 2 Circle.

- | | |
|--|---|
| 1. All mines in Baluchistan | 1. All mines in Assam |
| 2. All mines in Bihar except mines in the District of the Santhal Parganas and such mines in the District of Manbhum as lie east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the District | 2. All mines in Bengal |
| 3. All mines in Orissa | 3. Such mines in Bihar as lie in the District of the Santhal Parganas and in the District of Manbhum east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the District |
| 4. All mines in the North-West Frontier Province | 4. All mines in Bombay. |
| 5. All mines in the Punjab | 5. All mines in the Central Provinces |
| 6. All mines in Rajputana. | 6. All mines in Madras. |
| 7. All mines in the United Provinces | |

Statement No. 2

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1939.

Certificates granted to holders of British certificates of competency.

(a) FIRST CLASS

Name	Number of Indian certificate	Date of Indian Certificate.	Number of British Certificate.	Date of British Certificate.
Charlton, William John	406	10th January 1939	2592	24th July 1931.
Fairbank, Richard Herbert	407	10th January 1939	2369	2nd August 1935
Lawther, Benjamin	408	26th April 1939	2266	2nd August 1928.
Leggate, John	409	26th April 1939	960	4th February 1937.
Ghosh, Bhagaban Ram	410	16th Nov. 1939	3091	24th February 1939.
Brown, William Kenneth	411	16th Nov. 1939	2281	25th January 1929.
Duncan, James	412	16th Nov. 1939	2901	14th February 1936.
Boothroyd, James Edgar	413	16th Nov. 1939	1732	5th February
Atkinson, Ronald	414	16th Nov. 1939	2362	2nd A

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1939—*contd.*

INDIAN CERTIFICATES.

(a) FIRST CLASS.

Name.	Number of certificate	Date of certificate	Remarks
Ghosh, Prafulla Kumar	268	24th April 1939.	
Mandal, Pundarikaksha	269	Ditto.	
Chaudhury, Parcah Nath	270	Ditto.	
Paul, Jagannath	271	Ditto.	
Ghosh, Sunil Krishna	272	Ditto.	
Mukherjee, Chandra Shekhar . .	273	Ditto.	
Krishna, Subbuawami Iyer Gopala . .	274	Ditto.	

(b) SECOND CLASS.

Name.	Number of certificate.	Date of certificate	Remarks.
Ramnathan, S. N.	563	25th April 1939.	
Watcha, Fredon S	564	Ditto.	
Bose, Amal Chandra	565	Ditto.	
Claire, N. Singh	566	Ditto.	
Anand, Trilok Chand	567	Ditto.	
Marwaha, Babu Ram	568	Ditto.	
Saidha, Jagan Nath	569	Ditto.	
Babri, Rafiq Ahmad	570	Ditto.	
Borman, Priya Nath Roy	571	Ditto.	
Gupte, Dwarkanath Gojanan	572	Ditto.	

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1939—*contd.*

INDIAN CERTIFICATES—*contd.*(b) SECOND CLASS—*contd.*

Name	Number of certificate.	Date of certificate	REMARKS.
Mukherjee, Bhupendra Nath . . .	573	24th April 1939.	
Chatterjee, Butto Krishna . . .	574	Ditto.	
Ghatak, Shib Chandra . . .	575	Ditto	
Chatterjee, Nirmal Krishna . . .	576	Ditto.	
Mukherjee, Jay Ram . . .	577	Ditto.	
Banerjee, Sasmita Badan . . .	578	Ditto.	
Tata, Tehma Sivash . . .	579	Ditto.	
Mukherjee, Gopal Chandra . . .	580	Ditto	
Ray, Mahadeo . . .	581	Ditto.	
Singh, Iqbal . . .	582	Ditto	
Choudhury, Saradindu . . .	583	Ditto	
Mukherjee, Sushil Chandra . . .	584	Ditto	
Samanta, Bankun Chandra . . .	585	Ditto.	
Sen Gupta, Bimalaranjan . . .	586	Ditto	

Certificates granted to holders of British certificates of competency.

(c) SURVEYORS' CERTIFICATES.

Name	Number of British certificate.	Date of British certificate.	Number of Indian certificate.	Date of Indian certificate.
Jackson, Reginald Robert George.	1,163	2nd August 1933 .	7	10th "

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1939—*contd.*

INDIAN CERTIFICATES—*contd.*(c) SURVEYORS' CERTIFICATES—*contd.*

Name.	Number of certificate.	Date of certificate.	REMARKS.
Deo, Ram Chandra Gopal	109	10th January 1940.	
Dalal, Sib Nath	110	Ditto.	
De, Murari Mohan	111	Ditto.	
Jam, Inder Sam	112	Ditto.	
Mukherjee, Radha Gobinda	113	Ditto.	
Goowamy, Amulya Kumar	114	Ditto.	
Sinha, Kedar Nath	115	Ditto.	
Pathak, Bhashkar Dutt	116	Ditto.	
Ghosh, Nihar Ranjan	117	Ditto.	
Khanna, Raja Ram	118	Ditto.	
Temarhikar, Prabhakar Shankar	119	Ditto.	
Banerjee, Bandya Nath	120	Ditto.	
Sahal, Bhagwan Sharan	121	Ditto.	
Chatterjee, Gura Shankar	122	Ditto.	
Paul, Nand Lal	123	Ditto.	
Bhargava, Bharadwaj	124	Ditto.	
Chatterjee, Magaram	125	Ditto.	
Chatteraj, Gokul Kanta	126	Ditto.	
Sinha, Tinkori	127	Ditto.	
Chatterjee, Pankaja Kumar	128	Ditto.	
Samanta, Lalit Madhab	129	Ditto.	
Das, Suresh Chandra	130	Ditto.	
Mukerjee, Manindra Nath	131	Ditto.	
Chopra, H. L.	132	Ditto.	
Ghose, Hari Pado	133	Ditto.	

APPENDIX IV.—*contd.*Miscellaneous—*contd.*

Statement No 3.

NOTIFICATION.

New Delhi, the 16th January 1939.

No. M-1055.—In exercise of the powers conferred by section 30 of the Indian Mines Act, 1923 (IV of 1923) the Central Government hereby directs that the following further amendments of the Government of the same having the same having Act, namely:—

1. For rules 9 and 9-A, of the said Rules, the following rules shall be substituted, namely:—

"9. The register of all persons employed in the mine referred to in section 28 (1) of the Act, shall be in the form in Schedule A, and shall be kept at the office of the mine.

9-A The notice required under sub-section (1) of section 23-B, of the Act and the amended notice referred to in sub-section (3) of that section shall be in the form shown in Schedule B, written in English and in the court language of the district, and posted outside the office of the mine."

2. After rule 9-A, of the said Rules, the following rule shall be inserted, namely:—

"9-B For every mine to which the Central Government may, by general or special order, declare sub-section (4) of section 28 of the Act to be applicable, there shall be kept at the office of the mine a register in the form in Schedule C which shall show at any moment the name of every person then working below ground in the mine."

3 After rule 23 of the said Rules, the following rules shall be added, namely:—

"24. The register referred to in sub-section (2) of section 20 of the Act shall be maintained in the form in Schedule D.

25. (1) Any person desirous of being employed in any mine which is not below ground may obtain a certificate from a qualified medical practitioner that he has completed his fifteenth year and that he is fit for employment in such mine.

(2) Any person desirous of being allowed to be present in any part of a mine which is below ground may obtain from a qualified medical practitioner—

(a) a certificate that he has completed his seventeenth year; or

(b) a certificate that he has completed his fifteenth year and that he is fit to be allowed to be present in any part of a mine which is below ground

(3) Every certificate referred to in sub-rule (1) or sub-rule (2) shall be in the form in Schedule E.

(4) The left thumb mark of the person to whom any such certificate is granted shall be impressed on the certificate in the presence of the practitioner granting the same.

(5) A practitioner granting any certificate under this rule may charge a fee not exceeding one rupee for the same.

(6) Any person to whom a certificate has been granted under sub-rule (1) or sub-rule (2) shall, when he is at work in a mine or when he is present in a mine, as the case may be, wear round his neck, a token giving a reference to his certificate

26 (1) A qualified medical practitioner may, on receipt of a report from an Inspector of Mines and after examining the person to whom a certificate has been granted under rule 25, revoke the same for good and sufficient reasons to be recorded in writing

(2) A practitioner revoking a certificate shall cause the word 'Revoked' to be written in red ink across the certificate

(3) The practitioner may charge a fee not exceeding one rupee for revoking a certificate. Such fee shall be levied from the owner of the mine in which the holder of the certificate was employed or was present "

APPENDIX—V—contd.

Miscellaneous—contd.

Statement No. 3—contd.

4. For Schedules A and B, appended to the said Rules, the following Schedules shall be substituted, namely :—

SCHEDULE A.

(See rule 9.)

Register of persons employed in mine.

- (1) Name.
- (2) Caste
- (3) Age and sex.
- (4) Father's name or in the case of a married woman or widow, husband's name
- (5) Nature of employment.

(10) Remarks e which the employee belongs

NOTE.—(1) In making the entries in the register, the manager of the mine should so arrange the periods that no person employed in the mine is made to work in contravention of any of the provisions of Chapter VI of the Indian Mines Act, 1923.

(2) The register is not intended to serve as an attendance register and entries made in respect of an individual may hold good for long periods. Changes will be required only when an actual change occurs in the conditions of employment, for example, in the nature of the employment or in the periods of work.

SCHEDULE B

(See rule 9.A.)

Notice of commencement and end of Work and rest intervals.

Name of the mine.

Name of the owner of the mine.

It is hereby notified that persons employed in this mine will begin and end their work at the hours and have rest intervals between the hours mentioned below —

Kind of worker.	1st relay.		Interval for rest.		2nd relay. if any.		Interval for rest.		3rd relay. if any.		Interval for rest.		Remarks.
	<div></div>		<div></div>		<div></div>		<div></div>		<div></div>		<div></div>		
	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	
(1)	(2)		(3)		(4)		(5)		(6)		(7)		(8)
...	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	....
	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	

The words and letters not wanted should be scored out.

NOTE.—The work of persons employed below ground is to be reckoned from the time such persons leave the surface of the mine up to the time when they finally return thereto at the end of the relay.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 3—*contd.*

SCHEDULE C.

(See rule 9-B.)

Register of persons working below ground.

Name of the mine	} Front Page.
Name of the owner of the mine	

Date

Name of the person
leaving the
surface.

NOTE—Each name should be struck off or marked on the return to the surface of the person concerned.

SCHEDULE D.

(See rule 24.)

Register of minor accidents under section 20 (2)

Name of the mine	} Village, taluk and district.
Name of the owner of the mine	

(1) Date of entry in the register.

(2) Name of the person injured.

(3) Date of the accident.

(4) Nature of the accident.

(5) Nature of the injury.

(6) Duration of the enforced absence of the injured person from work.

(7) Nature of the medical relief given to the injured.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 3—*contd.*

SCHEDULE E.

[See rule 25 (3)]

Certificate of age/age and fitness under section 25-A/30 (e) of the Indian Mines Act, 1923.

1. Name of the applicant.
2. Father's/Husband's name.
- 3 Sex and caste or religion.
4. Residence.
5. Age certified.
6. Physical fitness.
7. Whether bears marks of successful vaccination.
8. Distinctive marks.
9. Reasons for refusal of certificate*

Left thumb impression.

Place.

Date.

Signature of qualified medical practitioner.

* Exact details of causes of physical disability should be clearly stated.

CERTIFICATE.

I hereby certify that I have personally examined (name)
 son/daughter/wife of
 (caste, etc)
 bearing the following distinctive marks
 residing at

who is desirous of being employed in a mine/allowed to be present in any part of a mine which is below ground and that his/her age as nearly as can be ascertained from my examination is _____ years and that he/she is fit for employment in a mine, to be present in any part of a mine which is below ground.

I further certify that he/she bears marks of successful vaccination and that he/she has been revaccinated within the last three years.

Left thumb impression

Place

Date

Qualified medical practitioner.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 3—*contd.*

5. In the Abstracts in rule 20-A of the said Rules,—

I. In the entries under the heading “Indian Mines Act, 1923”,—

(a) for paragraph 5, the following paragraph shall be substituted, namely :—

“5 (1) No person shall be allowed to work in a mine—

(a) on more than six days in any one week [section 22-A] or

(b) if he is employed above ground, for more than fifty-four hours in any week or for more than ten hours in any day [section 22-B (1)] or

(c) if he is employed below ground, for more than nine hours in any day [section 22-C (1)] or

(2) No person shall be allowed to work in a mine who has already been working in any other mine within the preceding twelve hours [section 23].”

(b) for paragraph 5-A, the following paragraph shall be substituted, namely :—

“5-A. (1) The periods of work for any person referred to in paragraph 5 (1) (b) above, along with his intervals for rest, shall not in any day spread over more than twelve hours, and he shall not work for more than six hours before he has had an interval for rest of at least one hour [section 22-B (2)]

(2) Persons belonging to two or more relays shall not be allowed to do work of the same kind above ground at the same moment, provided that they shall not be deemed to belong to separate relays by reason only of the fact that they receive their intervals for rest at different times [section 22-B (3)]

(3) Work of the same kind shall not be carried on below ground in any mine for a period spreading over more than nine hours in any day, except by a system of relays so arranged that the periods of work for each relay are not spread over more than nine hours [section 22-C (2)]

(4) No person employed in a mine shall be allowed to be in any part of the mine below ground except during the periods of work shown in respect of him in the register kept under section 28 (1) [section 22-C (3)]

(5) Where a worker works in a relay during a period extending over midnight, the ensuing day for him shall be deemed to be the period of twenty-four hours beginning at the end of the period of work fixed for the relay and the hours he has worked after midnight shall be counted towards the previous day [section 22-D]”

(c) for sub-paragraph (1) of paragraph 5-B, the following sub-paragraph shall be substituted, namely :—

“(1) A notice in the prescribed form stating—

(i) the time of the commencement and of the end of work at the mine and of each relay where work is carried by a system of relays; and

(ii) the time of the commencement and of the end of the intervals for rest fixed for persons employed above ground shall be posted outside the office of the mine and a copy thereof shall be sent to the Chief Inspector of Mines if he so requires [section 23-B (1)]”

(d) for sub-paragraph (3) of paragraph 5-B, the following sub-paragraphs shall be substituted, namely :—

“(3) Where any change in the time fixed for the commencement or for the end of the work

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 3—*contd.*

(4) No person shall be allowed to work in a mine otherwise than in accordance with the notice required by clause (1) of this abstract [section 23 (4)] "

(e) for paragraph 6, the following paragraph shall be substituted, namely :—

" 6 (a) No person who has not completed his fifteenth year shall be employed in a mine or be allowed to be present in any part of a mine which is below ground [section 26].

(b) No person who has not completed his seventeenth year shall be allowed to be present in any part of a mine which is below ground, unless—

(1) a certificate of fitness in the prescribed form granted to him by a qualified medical practitioner is in the custody of the manager of the mine ; and

(2) he carries while at work a token giving a reference to such certificate [section 26-A] "

(f) for paragraph 7, the following paragraph shall be substituted, namely :—

" 7. (1) For every mine there shall be kept a register in the prescribed form of all persons employed in the mine showing in respect of each such person—

(a) the nature of his employment,

(b) the periods of work fixed for him,

(c) the intervals of rest, if any, to which he is entitled,

(d) the days of rest to which he is entitled, and

(e) where work is carried on by a system of relays, the relay to which he belongs [section 28 (1)]

(2) No person shall be employed in a mine until the particulars required by sub-paragraph (1) of this paragraph have been recorded in the register in respect of such person, and no person shall be employed except during the periods of work shown in respect of him in the register [section 28 (3)].

(3) Minor accidents which cas of the person injured for a period e maintained in the prescribed form owner, agent or manager of the the 31st day of December in each year to the Chief Inspector of Mines [section 20 (2) and (3)]."

(g) Paragraph 12 shall be renumbered as paragraph 12 (1) and to that paragraph as so renumbered, the following sub-paragraph shall be added, namely :—

" (2) Whoever in contravention of sub-paragraph (3) of paragraph 7 fails to record minor accidents in the prescribed register or to give notice of any accidental occurrence shall be punishable with fine which may extend to five hundred rupees [section 38 (2)] "

II. In the entries under the heading " Abstract of the rules (for mines other than coal mines) "

(a) after paragraph 5, the following paragraphs shall be added, namely :—

" 6. (1) Any person desirous of being employed in any mine which is not below ground may obtain a certificate from a qualified medical practitioner that he has completed his fifteenth year and that he is fit for employment in such mine

(2) Any person desirous of being allowed to be present in any part of a mine which is below ground may obtain from a qualified medical practitioner—

(a) a certificate that he has completed his seventeenth year ; or

(b) a certificate that he has completed his fifteenth year and that he is fit to be allowed to be present in any part of a mine which is below ground.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 3—*contd.*

(3) The left thumb mark of the person to whom any such certificate is granted shall be impressed on the certificate in the presence of the practitioner granting it.

(4) A practitioner granting any such certificate may charge a fee not exceeding one rupee for it.

(5) Any person to whom such a certificate has been granted shall, when he is at work in a mine or when he is present in a mine, as the case may be, wear round his neck, a token giving a reference to his certificate (Rule 25)

7 (a) (1) A qualified medical practitioner may, on receipt of a report from an Inspector of Mines and after examining the person to whom a certificate has been granted under paragraph 25, revoke the same for good and sufficient reasons to be recorded in writing

(2) A practitioner revoking a certificate shall cause the word 'Revoked' to be written in red ink across the certificate

(3) The practitioner may charge a fee not exceeding one rupee for revoking a certificate. Such fee shall be levied from the owner of the mine in which the holder of the certificate was employed or was present (Rule 26)"

(b) for the existing Form under paragraph 3 substitute the following :—

SCHEDULE A.

(See rule 9)

Register of persons employed in mine.

- (1) Name
- (2) Caste.
- (3) Age and sex.
- (4) Father's name or in the case of a married woman or widow, husband's name.
- (5) Nature of employment.
- (6) Periods of work fixed for the employee.
- (7) Intervals for rest, if any, to which the employee is entitled.
- (8) Days of rest to which the employee is entitled.
- (9) Where work is carried on by a system of relays, the relay to which the employee belongs.
- (10) Remarks

NOTE—(1) In making the entries in the register, the manager of the mine should so arrange the periods that no person employed in the mine is made to work in contravention of any of the provisions of Chapter VI of the Indian Mines Act, 1923.

(2) The register is not intended to serve as an attendance register and entries made in respect of an individual may hold good for long periods. Changes will be required only when an actual change occurs in the conditions of employment, for example, in the nature of the employment or in the periods of work."

(c) for paragraph 3 A substitute the following :—

"3-A. The notice required under sub-section (1) of section 23-B of the Act and the notice referred to in sub-section (3) of that section shall be in the following form and in English and in the Court language of .. outside the office of the mine."

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 3—*contd.*

SCHEDULE B.

Notice of commencement and end of work and rest intervals.

Name of the mine

Name of the owner of the mine

It is hereby notified that persons employed in this mine will begin and end their work at the hours and have rest intervals between the hours mentioned below :—

Kind of worker.	1st relay.		Interval for rest.		2nd relay, if any.		Interval for rest.		3rd relay, if any.		Interval for rest.		Remarks.
	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	Begins.	Ends.	
	(2)		(3)		(4)		(5)		(6)		(7)		
	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	A.M.	
	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	

The words and letters not wanted should be scored out.

NOTE.—The work of persons employed below ground is to be reckoned from the time such persons leave the surface of the mine up to the time when they finally return thereto at the end of the relay.

(Rule 9-A.)"

M. S. A. HYDARI,
Secy. to the Govt. of India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 4.

NOTIFICATION.

New Delhi, the 9th February 1939.

No. ML-955.—In exercise of the powers conferred by section 30-A of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to make the following rules, the same having been previously published as required by sub-section (1) of section 31 of the said Act, namely:—

COAL MINES RESCUE RULES.

CHAPTER I.

PRELIMINARY.

1. *Short title and commencement.*—(1) These rules may be called the Coal Mines Rescue Rules, 1939.
- (2) Rules 1 to 27 shall come into force at once. The remaining rules shall come into force on such date as the Central Government may, by notification in the *Gazette of India*, appoint.
2. *Extent*—These rules shall apply to—
 - (i) the area known as the Jhama coalfield in the province of Bihar; and
 - (ii) the area known as the Raniganj coalfield in the provinces of Bengal and Bihar.
3. *Definitions*—In these rules, unless there is anything repugnant in the subject or context,—
 - (a) "The Act" means the Indian Mines Act, 1923;
 - (b) "Chief Inspector" means the Chief Inspector of Mines;
 - (c) "Committee" means the Rescue Stations Committee constituted under rule 4;
 - (d) "Member" means a member of the Committee; and
 - (e) "President" means the President of the Committee.

CHAPTER II.

CONSTITUTION AND PROCEDURE OF COMMITTEE.

4. *Constitution of Rescue Stations Committee.*—(1) The Central Government shall constitute a Committee consisting of the following members for the establishment, maintenance and management of Rescue Stations in the areas to which these rules apply, namely:—
 - (i) an Inspector of Mines, nominated by the Chief Inspector;
 - (ii) one person nominated by the Indian Mining Association;
 - (iii) one person nominated in rotation for the term of office specified in sub-rule (1) of rule 5 by the following bodies in order of priority:—
 - (a) the Indian Mining Federation;
 - (b) the Indian Colliery Owners' Association;
 - (iv) one person nominated by the National Association of Colliery Managers, Indian;
 - (v) one person nominated by the Indian Mine Managers Association; and

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 4—*contd.*CHAPTER II—*contd.*

- (1) two persons to represent the interests of persons employed in the mines situated in the areas to which these rules apply nominated in the manner described in clause (e) of section 10 of the Act.

Provided that, if any authority or body entitled to nominate any member fails to make any nomination within a period of thirty days from the date it is called upon by the Central Government to make the nomination, the Central Government may nominate a member to fill the vacancy.

- (2) The members shall elect one of their number as President.

(3) No act done by a Committee shall be questioned on the ground merely of the existence of any vacancy in, or any defects in the constitution of the Committee.

5. *Term of office*—(1) Save as otherwise provided in these rules, a member shall hold office for three years from the date of his appointment and shall be eligible for re-nomination.

(2) A member nominated to fill a casual vacancy or a member appointed by the Central Government on the failure of any authority or body entitled to make a nomination, shall hold office so long as the member whose place he fills would have been entitled to hold office if the vacancy had not occurred or the nomination had been made, as the case may be.

- (3) Inspectors of Mines shall hold office as directed by the Chief Inspector.

(4) Save as otherwise provided in these rules, the President shall hold the office of President for a period of three years from the date of his election and shall be eligible for re-election;

Provided that on ceasing to be a member, the President shall be deemed to have vacated the office of President and shall not, so long as he is not a member, be eligible for re-election.

6. *Resignation*.—(1) A member other than the President may resign his office by letter addressed to the President.

- (2) The President may resign his office by letter addressed to the Central Government.

7. *Absence from India*.—(1) Before a member leaves India—

(a) he shall intimate to the President the date of his departure from and the date of his expected return to India; and

(b) if he intends to be absent from India for a longer period than six months he shall tender his resignation.

(2) If any member leaves India without taking the action required by sub-rule (1), he shall be deemed to have resigned with effect from the date of his departure from India.

(3) If the President leaves India without resigning his office as President, he shall be deemed to have resigned from the date of his departure from India.

8. *Vacation of Office*.—(1) A member shall be deemed to have vacated his seat on the Committee—

(a) if he becomes bankrupt or insolvent or suspends payment or compounds with his creditors.

(b) if he is convicted of any offence which is punishable under the Indian Penal Code and is under the provisions of the Criminal Procedure Code non-bailable; or

(c) if he is absent from meetings of the Committee during a period of three consecutive months without leave of absence from the Committee.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 4—*contd.*CHAPTER II—*contd.*

(2) The Central Government may after such inquiry as it deems necessary declare that the President has vacated his office and the Committee shall thereupon elect another member as President

9 *Time and place of meetings*—(1) The President may at any time call a meeting of the Committee and shall do so if a requisition for that purpose is presented to him by four other members

(2) The meetings of the Committee shall, unless the President in any case otherwise directs, be held at Dhanbad

10 *Notice of meetings*—Not less than seven clear days before any meeting of the Committee notices of the time and place of the intended meeting, signed by the President, shall be left at or posted to the usual place of residence of every other member

Provided that in cases of urgency an emergency meeting may be summoned at any time by the President who shall inform the other members of the subject-matter for discussion and the reasons for which he considers it urgent. Business not arising out of the subject-matter shall not be introduced or transacted at an emergent meeting

11 *Presiding at meetings*—The President shall preside at every meeting of the Committee at which he is present. If the President is absent from any meeting the members present shall elect one of their number to preside over the meeting and the member so elected shall at that meeting exercise all the powers of the President.

12 *Quorum*—No business shall be transacted at a meeting of the Committee unless at least four members are present

Provided that if at any meeting less than four members attend the President may adjourn the meeting to a date not less than seven days later and inform the members present and notify other members that he proposes to dispose of the business at the adjourned meeting irrespective of a quorum, and it shall thereupon be lawful to dispose of the business at such adjourned meeting irrespective of the number attending

13 *Powers and duties of the President*.—The President shall be the Principal Executive Officer of the Committee and, in addition to the other powers and duties conferred upon him by these rules, shall—

- (a) present all important papers and matters to the Committee as early as practicable;
- (b) issue orders as to the method of carrying out the decisions of the Committee;
- (c) sign or, subject to a resolution by the Committee, authorise some other person to sign, cheques issued on behalf of the Committee;
- (d) grant or, subject to a resolution by the Committee, authorise some other person to grant, receipts on behalf of the Committee for all moneys received under these rules;
- (e) maintain or cause to be maintained an account of the receipts and expenditure of the Committee; and
- (f) present an annual draft report on the working of the Committee to the Committee for approval and submit the report in the form approved by the Committee to the Central Government

14 *Disposal of business*.—(1) All questions which the Committee is required to take into consideration shall be considered either at its meetings or by circulation of the papers as the President may direct

(2) When a question is referred by circulation of papers any member may request that the question be considered at a meeting of the Committee. If three or more members make such a request the President shall direct that it be so considered; and if any member makes such a request, he may direct that it be so considered

15 *List of Business*—(1) The President shall circulate to the other members at least three days before a meeting of the Committee a list of business to be disposed of at that meeting

(2) No business not on the list shall be considered without the permission of the President.

16 *Decision by majority*—(1) Every question at a meeting of the Committee shall be decided by a majority of votes of the members present and voting on that question

(2) Every question circulated to the members shall, unless the President in pursuance of sub-rule (2) of rule 14 reserves it for consideration at a meeting, be decided in accordance with the opinions of the majority recording opinions.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 4—*contd.*CHAPTER III—*concl'd.*

23 *Refunds and recoveries*—Where the amount of the excise duty due under these rules has not been collected or where the amount collected is in excess of the amount due, the Railway Administration shall deal with the undercharge or overcharge, as the case may be, on the same principles as apply to undercharges and overcharges in regard to railway freight charges.

24. *Deposit of moneys*—All excise duty and other moneys received on behalf of the Committee shall be deposited in the Government treasury at Dhanbad to the credit of the Committee.

Provided that the Committee may from time to time authorise the retention in the charge of the President or any other person of such sum as it thinks fit as petty cash to meet contingent expenditure

25 *Application of excise duty and other moneys received.*—The proceeds of the excise duty and any other moneys received by the Committee shall be applied to meeting the expenses of the Committee and the maintenance and upkeep of the Rescue Stations.

26. *Keeping auditing and publication of accounts.*—(1) The Committee shall keep accounts of all moneys received and expended during each financial year.

(2) Such accounts shall be examined and audited annually by auditors appointed in this behalf by the Central Government.

(3) The auditors may disallow any item which has, in their opinion, been expended out of any moneys so received otherwise than as directed by or under these rules.

(4) If any item is disallowed, an appeal may be made to the Central Government whose decision shall be final.

(5) The audited statement of receipts and expenditure together with the annual report referred to in clause (f) of rule 13 shall be submitted to the Central Government not later than July in each year.

(6) An abstract statement of the receipts and expenditure shall be published annually in the *Gazette of India*.

CHAPTER IV.

RESCUE STATIONS.

27. *Maintenance and location of Rescue Stations*—(1) The Committee shall establish as early as practicable and maintain one Rescue Station in the Jharia coalfield and one Rescue Station in the Raniganj coalfield.

(2) The Stations shall be located—

(a) for the Jharia coalfield at the junction of the Jharia and Sijua roads near the Imperial Bank of India;

(b) for the Raniganj coalfield near Asansol.

28 *Appointment of Superintendents.*—Each Rescue Station shall be placed under the control of a competent Superintendent who—

(i) has been for two years a Superintendent or Instructor at a rescue station or a member of a permanent rescue corps, or

(ii) has been fully trained in rescue work,

and has had five years' practical experience of underground work in a mine.

29 *Appointment of Instructors.*—(1) Not less than three competent instructors shall be employed at each Rescue Station to train rescue workers

(2) No person shall be appointed as an Instructor unless he has had at least three years' practical experience of underground work in a mine.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 4—*contd.*CHAPTER IV—*concl.*

(3) The Superintendent of the station may be included as an instructor for the purpose of sub-rule (1)

(4) At least one instructor shall always be in attendance at the Station and one instructor shall be appointed to take charge of the Station in the absence of the Superintendent

30 *Permanent Rescue Corps*—(1) A permanent rescue corps shall be maintained at each Rescue Station. Exclusive of the Superintendent and of the person appointed to take charge of the Station in his absence, the corps shall consist of not less than six fully trained men. One or more members shall be trained to act as leaders

(2) It shall be the duty of the corps—

- (a) to conduct rescue work and take all practicable steps to minimize danger in mines after any explosion or outbreak of fire or dangerous irruption of noxious or inflammable gas;
- (b) generally to fulfil any other obligations imposed upon them by these rules

31. *Attendance of Corps at Station*—The members of the rescue corps maintained at a Rescue Station shall be continuously employed at the Station, and in constant residence there

32. *Apparatus and equipment*—(1) At every Rescue Station there shall be provided and maintained in good order, apparatus and equipment suitable and sufficient for the purpose. Such apparatus and equipment shall be of a type or standard approved by the Chief Inspector—

(2) The following apparatus and equipment to be provided in pursuance of sub-rule (1) shall be of a type or standard approved by the Chief Inspector—

- (a) breathing apparatus;
- (b) smoke helmets and other apparatus serving the same purpose;
- (c) gas masks,
- (d) reviving apparatus,
- (e) electric safety lamps and flame safety lamps;
- (f) first-aid boxes,
- (g) fire extinguishers

Any apparatus or equipment approved by the Chief Inspector in pursuance of this rule may be approved either absolutely or subject to conditions

(3) No apparatus or equipment specified in heads (a) to (g) in sub-rule (2) shall be provided or used at any Rescue Station or mine if it is not of a type or standard approved by the Chief Inspector.

(4) Breathing apparatus for use at a mine in rescue work or training shall be obtained as required from the Rescue Station serving the mine.

(5) All breathing apparatus and every flow-meter shall be adjusted and tested periodically, and the purity of oxygen for use in breathing apparatus shall be tested. The tests shall be made in the manner prescribed in Schedule II to these rules

33. *Reporting of accidents or dangerous occurrences*—(1) In the event of any accident or dangerous occurrence taking place at any Rescue Station, a similar report shall be sent by the Superintendent of the Station.

(2) If any such accident or dangerous occurrence takes place at any Rescue Station, a similar report shall be sent by the Superintendent of the Station.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 4—*contd.*

CHAPTER V.

ORGANISATION AND EQUIPMENT AT MINES.

34. *Appointment of men from mines to act with permanent rescue corps.*—The manager of every mine situated in the areas to which these rules apply employing 100 or more persons underground on any one day of the preceding twelve months shall appoint on the following scale fully trained men to co-operate with the rescue station in rescue work and practice—

Where the total number of persons employed underground is not more than 500	not less than one trained man.
Where the total number of persons employed underground is more than 500 but not more than 1,000	not less than two trained men.
Where the total number of persons employed underground is more than 1,000 but not more than 1,500	not less than three trained men.
Where the total number of persons employed underground is more than 1,500	not less than four trained men.

35. *Disposition of rescue workers*—(1) So far as practicable it shall be arranged that trained men for rescue work at a mine, where there is more than one, shall not all be employed underground at the same time.

(2) Effective arrangements shall be made at every mine for summoning rescue workers immediately their services are required.

36. *Telephonic communication*—Every mine situated in the areas to which these rules apply shall be in telephonic communication with the Rescue Station serving the mine.

Provided that if the number of persons employed underground in a mine does not exceed one hundred, the requirements of this rule shall be deemed to have been complied with if the office of the mine is situated within a distance of two miles from a telephone connected to the Rescue Station:

Provided further that the Chief Inspector may exempt any mine, where there is no public telephone system, from the provisions of this rule subject to such conditions as he may impose to ensure other prompt means of communication with the Rescue Station.

37. *Tracings showing ventilation, etc.*—There shall be kept at every mine, other than an open mine, in which the number of persons employed exceeds one hundred, situated in the areas to which these rules apply, tracings showing ventilation, etc., in accordance with the provisions of the rules.

these rules.

APPENDIX IV—*contd.*

Miscellaneous—*contd.*

Statement No. 4—*contd.*

CHAPTER V—*concl.*

38 *Selection of rescue workers*—(1) The persons to be trained in rescue work shall be carefully selected on the grounds of their coolness, powers of endurance and general suitability for the work, and, in the case of men from mines to be trained to co operate with permanent rescue corps, also on the ground of their knowledge of the mine

(2) No person shall be trained as a rescue worker unless—

- (i) he is certified by a qualified medical practitioner after examination in accordance with Schedule IV to these rules to be free from any organic disease or weakness, and to be fit for undertaking rescue work in a mine;
- (ii) he is considered by the Superintendent of the Rescue Station to be suitable for rescue work with breathing apparatus;
- (iii) the manager of the mine at which the person is employed certifies in writing that he has had sufficient underground experience for the purpose of rescue work; and
- (iv) he is the holder of a certificate of proficiency in first-aid from an organization approved by the Chief Inspector.

39 *Medical examination of rescue workers*—Every rescue worker so long as he continues to practise shall be re examined every 12 months by a qualified medical practitioner in accordance with Schedule IV to these rules, and no person shall continue to practise after re-examination unless he is certified to be fit

40 *Instruction and Practice*—(1) Every person selected for training in rescue work shall undergo the course of instruction and practices set out in Part I of Schedule V to these rules, until he has been certified as efficient by the Superintendent

(2) Rescue workers who have been so certified shall undergo practices and receive instruction as set out in Part II of Schedule V to these rules.

(3) All practices required by Schedule V shall last at least two hours except on occasion when, in the opinion of the Instructor, it is desirable in the interests of safety to curtail the practice. At some of the practices the breathing apparatus shall be worn continuously for two hours.

41 *Code of Signals in training*—The code of signals used in training shall be that set out in Schedule VI to these rules

CHAPTER VI.

CONDUCT OF RESCUE WORK.

42 *Duties of Manager or principal official present at surface in emergencies*.—On receiving information of any emergency likely to require the services of a rescue corps or brigade, the manager, or, in his absence, the principal official present at the surface shall immediately—

- (a) telephone to the Rescue Station; inform the responsible officer on duty at the Station of the character of the occurrence; state whether assistance will be needed from rescue brigades other than the permanent rescue corps or the brigades attached to the mine;
- (b) summon the trained men attached to the mine;
- (c) summon medical assistance;
- (d) telephone to the Chief Inspector or Inspector;
- (e) if necessary, communicate with the Police Station;

APPENDIX IV—*contd*Miscellaneous—*contd*.Statement No. 4—*contd*CHAPTER VI—*contd*

43. *Entry into mines for rescue operations.*—(1) No person shall be allowed to enter a mine or part of mine which is unsafe for the purpose of engaging in rescue operations unless authorised by the manager or in his absence, by the principal official of the mine present at the surface. Only men trained in the use of breathing apparatus shall be permitted to enter the mine for the purpose of using such apparatus.

(2) During the progress of such operations a person or persons shall be stationed at the entrance of the mine and required to keep a written record of all persons entering and leaving the mine.

44. *Leader.*—(1) Every corps or brigade engaged in work with breathing apparatus in a mine shall be under a leader appointed by the Superintendent of a Rescue Station.

(2) The leader shall not engage in manual work. He shall give his attention solely to directing the brigade and to maintaining its safety. He shall examine the roof and supports during the journey in and, if there is any likelihood of a fall, shall not proceed until the brigade has made the place secure.

45. *Numbers employed.*—The number of persons in any corps or brigade using breathing apparatus in a mine shall not be less than five or more than six including the leader.

46. *Supply of Oxygen.*—If the type of apparatus admits of it, at least one person in every corps or brigade shall wear an apparatus with an extension for the supply of oxygen to another person in case of necessity.

(2) If the Superintendent of the Rescue Station serving the mine is present, the manager or the principal official in charge of the mine shall consult him before issuing such instructions.

(3) Unless the leader is personally thoroughly familiar with the roadways in question, the route to be followed shall be marked on a tracing, which the leader shall take with him into the mine.

(4) The leader shall not permit the brigade to go underground until he has received such instructions and, if necessary, such tracing.

(5) The leader shall not deviate from the instructions received by him except when such deviation is necessary for the purpose of saving human life.

All be established in fresh air, as near base shall, if possible, be connected
base is on the surface to the shaft

(2) Except in cases where the delay involved may result in danger to life, no brigade shall proceed beyond any place where a base is to be established until there have been stationed at such base the following:—

(a) two men, of whom at least one should understand rescue appliances and first aid;

(b) a spare brigade with rescue apparatus and ready for immediate service;

(c) one or more reviving apparatus, oxygen-revivers, stretchers, and birds.

(3) Whenever men are already at work beyond the base, there shall be stationed at the base as soon as possible the persons, spare brigade, apparatus and equipment specified in clauses (a), (b) and (c) of sub rule (2).

49. *Supply of gas-masks and arrangements at surface.*—If the manager considers it necessary for safety, persons engaged in dealing with a fire shall be equipped with gas masks and a rescue brigade equipped with apparatus shall be maintained on the surface in case of necessity.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 4—*contd.*CHAPTER VI—*contd.*

50 *Test of apparatus*—Before proceeding underground the leader shall test, or witness the testing of, all rescue apparatus of the brigade. He shall check the equipment of his party, and, immediately before entering irrespirable air, shall make sure that all apparatus is working properly:

Provided that if the leader and the manager of the mine consider that in order to save life the brigade should proceed at once into the mine, this test may be dispensed with if the apparatus has previously been tested at a Rescue Station.

51. *Duties of leader underground*—(1) If the atmosphere is clear, the leader shall when passing the balk. If the all not allow acticable, he

(2) The leader shall keep the team together and shall not allow any member of the team to stray.

(3) When using rescue apparatus the leader shall carry a watch, shall read the pressure of the compressed oxygen every 20 minutes or thereabouts, and shall commence the return journey in ample time. In travelling he shall adapt the rate to that of the slowest member. If any member of the corps or brigade is in distress, he shall immediately return to the fresh air base with the whole brigade.

(4) The leader shall not permit any corps or brigade using breathing apparatus in a mine to remain at work for longer than 1½ hours at any one time.

52. *Duties of members of rescue brigades*—Every member of a rescue corps or brigade engaged in work with breathing apparatus in a mine shall obey the orders of the leader of the team.

53. *Travelling with rescue apparatus*—In travelling with rescue apparatus, each member of the brigade shall keep the place given him when numbering off. If the pace is too quick, or if distress is felt, the member shall at once call attention to the fact.

54. *Restriction on second spell of work*—No person shall commence a second or subsequent spell of work in noxious air without being examined and passed by a qualified medical practitioner, if present, or by the Rescue Station Superintendent or other competent person if a qualified practitioner be not present.

55. *Code of signals*—Members of rescue corps or brigade shall, in general, use the signals prescribed in Schedule VI to these rules, in communicating to one another.

SCHEDULE I.

[SEE RULE 32 (H).]

Apparatus and Equipment.

Minimum to be kept at each Rescue Station—(1) Twenty-four complete suits of breathing apparatus, with means of supplying sufficient oxygen or liquid air to enable such apparatus to be constantly used for two days, and of charging such apparatus.

If the type of apparatus admits of it, one set of apparatus in every four shall be provided with an attachment for supplying oxygen or air to any person found overcome by noxious gases in a mine.

(ii) Four smoke helmets or other apparatus serving the same purpose with not less than 120 feet of tubing for each.

(iii) Twenty electric safety lamps or electric torches of a type approved by the Chief Inspector; and 100 approved flame safety lamps.

APPENDIX IV—contd.

Miscellaneous—contd.

Statement No. 4—contd.

SCHEDULE I—contd.

- (iv) Four oxygen reserving apparatus (not of the forced breathing type) each with a cylinder or cylinders capable of supplying at least 20 cubic feet of oxygen.
- (v) Thirty gas masks of a type approved by the Chief Inspector with two refills for each.
- (vi) A first-aid box or boxes.
- (vii) Fresh drinking water.
- (viii) Cages of small birds for testing for carbon monoxide.
- (ix) A motor ambulance or car of adequate capacity and power in constant readiness.
- (x) Two portable signalling devices.

SCHEDULE II.

[SEE RULE 32 (3)]

Breathing Apparatus, Adjustment and Tests.

1. In every breathing apparatus which is arranged so as to give a uniform oxygen delivery, the reducing valve shall be so adjusted as to supply not less than two litres of oxygen per minute.

2. Every Breathing apparatus shall be thoroughly tested at least once a month in the following manner, and the results of the test giving such particulars as the Chief Inspector by order in writing may specify in this behalf shall be recorded—

(i) The apparatus shall be carefully examined in respect of its general condition and particular situation shall be given to any delicate and perishable parts.

(ii) The apparatus shall be completely immersed in water. For the purpose of testing a compressed oxygen cylinder shall be immersed in water by the superintendent or one of the instructors of the Rescue Station, or by the captain of the rescue brigade. If any leakage is observed the apparatus shall be deemed unsafe for use.

This test may be omitted in respect of the pack of a liquid air apparatus in so far as it would be damaged by immersion.

(iii) The pressure at which any automatic relief valve discharges shall be measured.

3. The following additional tests shall be applied to compressed oxygen apparatus:—

(i) The pressure in the oxygen cylinder shall be measured.

(ii) The rate of delivery of oxygen shall be measured by a flow-meter and if that rate is capable of being adjusted by the wearer of the apparatus, it shall be measured over the whole range of adjustment.

4. No breathing apparatus shall be used underground unless immediately before use it has been tested and found safe in the manner prescribed by paragraph (ii) of clause 2 of this Schedule.

Provided that as a matter of urgency to save life, this test may be omitted and a test for leakage by mouth suction applied instead.

5. The oxygen in any cylinder used for use in connection with breathing apparatus shall be tested and no oxygen which is found to contain more than 1 per cent of carbon monoxide shall be used. Results of every analysis giving such particulars shall be recorded.

6. Flow meters shall be tested for accuracy at least once in every six months, and the results of every test giving such particulars as the Chief Inspector may require shall be recorded.






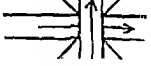
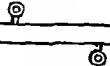


7. Where by this Schedule any particulars are required to be recorded, they shall be recorded forthwith in a book to be kept at the station or mine, as the case may be.

APPENDIX IV—*contd.**Miscellaneous—contd.*Statement No. 4—*contd.*

SCHEDULE III

(SEE RULE 37)

Code of Signs.

BRICK, STONE, OR	VENTILATION STOPPINGS .	
FIRE DAMS OR SEALS		
WATER DAMS		
DOORS		
REGULATORS		
AIR CROSSINGS		
TELEPHONES		
UNDERGROUND AMBULANCE STATION IN RED . . .		
DIRECTION OF AIR CURRENT		
INTAKE AIRWAYS—BLUE		
RETURN AIRWAYS—RED		

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 6.

NOTIFICATION.

New Delhi, the 9th March 1939.

No. M-1055 (2).

of section 10 of the
that the following
the Department of
of a Mining Board

In the said notification, for entries (1) and (3) the following entries shall respectively be substituted, namely —

- “(1) Mr A. P. Middleton, I C S, Commissioner, Chota Nagpur Division—Chairman (nominated by the Central Government); and
(3) Rai Bahadur Nagendra Nath Roy, Additional Deputy Commissioner, Dhanbad—Member (nominated by the Central Government)”

M. S. A. HYDARI,
Secy. to the Govt. of India.

Statement No. 7.

NOTIFICATION.

New Delhi, the 9th March 1939.

No. M-1055 (2).—In exercise of the powers conferred by sub-section (1) of section 10 of the
at the following
a Department of
Mining Board

In the said notification, for entries Nos. (1), (3), (6) and (7) the following entries shall be substituted respectively, namely:—

- “(1) Mr A. P. Middleton, I. C. S., Commissioner, Chota Nagpur Division—Chairman (nominated by the Central Government);
(3) Mr. J. W. Houlton, C. I. E., I. C. S., Deputy Commissioner, Hazaribagh—Member (nominated by the Central Government);
(6) Mr. N. P. Thadani, I. C. S., Deputy Commissioner of Singhbhum—Member (nominated by the Central Government to represent the interest of miners); and
(7) Dr H. W. T. Martin, M. B., Ch. B., Chief Medical Officer of the Indian Copper Corporation Limited, Ghatsila—Member (nominated by the Central Government to represent the interest of miners)”

M. S. A. HYDARI,
Secretary to the Government of India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 8.

NOTIFICATION.

New Delhi, the 29th April 1939.

No. M-955.—In exercise of the powers conferred by rule 4 of the Coal Mines Rescue Rules, 1939, the Central Government is pleased to constitute the Rescue Stations Committee and to direct that it shall consist of the following members, namely:—

1. Mr N. Barracough, Inspector of Mines, No. 1 Circle, nominated by the Chief Inspector of Mines;
2. Mr S P Tarlton, Chief Mining Engineer, Bursakur Coal Company Limited, nominated by the Indian Mining Association;
3. Mr P Basu of Messrs North Adjal Coal Company Limited, nominated by the Indian Mining Federation;
4. Mr W McDonald, Manager, Victoria Colliery, Kulti, nominated by the National Association of Colliery Managers, Indian Branch;
5. Dr B P Sinha, Professor of Mining Engineering, Indian School of Mines, Dhanbad, nominated by the Indian Mine Managers Association;
6. Mr P C Bose, Secretary of the Indian Miners' Association, nominated by the registered trade unions of miners (to represent the interest of miners), and
7. Rao Bahadur D D Thacker of Pure Jharia Colliery, nominated by the Central Government (to represent the interest of miners).

M. S. A. HYDARI,
Secretary to the Government of India.

Statement No. 9.

NOTIFICATION.

Simla, the 5th July 1939.

In the said Regulations—

I. After regulation 70A, the following regulation shall be inserted, namely:—

“70B (1) The inspection shall be made with an approved locked flame safety lamp, and no ad-

- (2) The inspection shall be made with an approved locked flame safety lamp, and no ad light shall be used, other than an approved electric torch or lamp.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 9—*concl.*

(3) The result of every such inspection shall be reported by the person making it in the manner required by sub-regulation (5) of regulation 70 and shall be recorded in the book maintained in accordance with sub-regulation (2) of that regulation.

(4) Nothing in this regulation shall be construed to affect the provisions of regulation 70."

II. After regulation 121, the following regulation shall be inserted, namely:—

"121A. (1) The Chief Inspector may require the manager of any mine in which, or in any part of which, a mechanical ventilator is in use, to submit within one month Standing Orders specifying the action that shall be taken with respect to the withdrawal of workmen from such mine or parts of such mine in the event of a stoppage of the mechanical ventilator.

(2) The Chief Inspector may approve of such Standing Orders either in the form submitted to him or with such additions or alterations as he may think fit and shall give notice in writing to the manager that the Standing Orders in the form approved by him shall be enforced at the mine.

(3) On receipt of the notice from the Chief Inspector, the manager shall post the Standing Orders in conspicuous places at the mine both above and below ground and shall be responsible for securing effective compliance with them."

III. For clause (g) of regulation 127, the following clause shall be substituted, namely:—

"(g) The manager shall take such steps as may be necessary to ensure that the mine is kept in a safe condition and that the mine is not used for any purpose other than the purpose for which it was designed."

IV. After regulation 134, the following regulation shall be inserted, namely:—

"135. The person conducting the search shall—

(3) The person conducting the search shall—

(a) search or turn out all pockets ;

(b) pass his hand over all clothing ; and

(c) examine any article in the possession of the person searched

(4) If the person conducting the search is satisfied that the person searched is innocent of any offence, he shall sign a certificate to that effect and forward it to the manager of the mine.

M. S. A. HYDARI,

Secretary to the Government of India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 10.

NOTIFICATION.

Simla, the 20th July 1932.

No. ML-955.—In exercise of the powers conferred by section 29 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made in the Indian Coal Mines Regulations, 1926, the same having been previously published as required by sub section (1) of section 31 of the said Act, namely:—

In the said Regulations—

I. Sub-regulation (3) of regulation 63 shall be omitted.

II. For regulations 77 and 78, the following regulations shall be substituted, namely:—

"77. (1) The dimensions of pillars and galleries and the shape of pillars formed in any seam shall be such as to ensure stability during the formation of pillars, during extraction of pillars, and during the period between such formation and extraction.

(2) Save with the previous permission in writing of an Inspector, no gallery in a seam shall exceed 10 feet in height or 16 feet in width.

(3) Where the "pillar and stall" system of working is adopted the pillars formed in any seam shall normally be rectangular in shape.

(4) The distance between the centres of any two adjacent pillars left in a seam shall not be less than that specified in the appended table as corresponding to the depth of the seam from the surface and the average width of the galleries in the workings in question.

Depth of seam from surface.	Where the average width of the galleries does not exceed 10 feet, the distance between centres of adjacent pillars shall not be less than—	Where the average width of the galleries does not exceed 12 feet, the distance between centres of adjacent pillars shall not be less than—	Where the average width of the galleries does not exceed 14 feet, the distance between centres of adjacent pillars shall not be less than—	Where the average width of the galleries does not exceed 16 feet, the distance between centres of adjacent pillars shall not be less than—
	Feet.	Feet.	Feet.	Feet.
Not exceeding 200 feet .	40	50	60	65
Exceeding 200, but not exceeding 300 feet.	45	55	65	70
Exceeding 300, but not exceeding 500 feet.	55	65	75	85
Exceeding 500, but not exceeding 800 feet.	75	85	100	115
Exceeding 800 feet .	95	115	130	150

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 10—*contd.*

Provided that the Chief Inspector may, in the case of any particular seam or mine, by order in writing and subject to such conditions as he may specify, vary the distances specified in the said table.

(5) Nothing in sub-regulations (2), (3) and (4) shall apply to workings in a mine made before the coming into force of this regulation. In such workings the following provisions shall apply, except in depillaring operations:—

(a) if the distances between the centres of adjacent pillars are smaller than those specified in the table appended to sub-regulation (4), the pillars shall not be further reduced;

(b) if the distances between the centres of adjacent pillars are not smaller than those specified in the table appended to sub-regulation (4), the pillars shall not be so reduced as to render those distances smaller than—

(i) the distances so specified, or

(ii) any distance required in this behalf by the Chief Inspector;

(c) if the height or width of a gallery exceeds the figure specified in sub-regulation (2), the dimensions of the gallery shall not be further increased without the permission in writing of an Inspector; and

(d) if the height or width of a gallery is less than the figure specified in sub-regulation (2), it may be increased only to the extent so specified or to such extent as may be permitted by an Inspector in writing.

(6) In the case of all workings, of pillars or galleries or the premature collapse before or during the extraction of such workings as he shall specify.

in such a way as to prevent collapse or subsidence of the goaf. Adequate timber or other

(2) Save as provided by sub-regulation (3), no pillars shall be reduced or split in such a manner as to reduce the dimensions of the resultant pillars below those required by regulation 77 or by any order passed thereunder, nor shall any gallery be so heightened as to exceed the height required by or under that regulation.

(3) During the systematic extraction of pillars no "splitting" or reduction of pillars or the heightening of galleries shall be effected for a greater distance than the length of two pillars ahead of the pillar that is being extracted or from the point at which pillar extraction is about to begin.

(4) An Inspector may by order in writing relax the provisions of sub-regulations (2) and (3) in respect of any specified workings to such extent and on such conditions as he may specify in the order."

III. Regulation 78-A shall be re-numbered as regulation 78 B and before that regulation as so re-numbered the following regulation shall be inserted, namely:—

"Nothing in regulation 78-A shall apply to workings in which previous notice of the intention to undertake such work has been sent to the Inspector."

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 10—*contd.*

IV. For regulation 80, the following regulation shall be substituted, namely:—

- " 80 (1) In any mine in which two or more seams or sections of a seam are close to each other, the pillars in the one seam or section shall, where the strata are not highly inclined, be, as far as practicable, vertically above or below the pillars in the other seam or section.
- (2) No work in a higher seam or section shall be done over an area in a lower seam or section which may collapse unexpectedly.
- (3) No seam in a mine shall be worked in more than one section without the permission in writing of the Chief Inspector and under such conditions for ensuring the stability and safety of the workings as he may specify.
- (4) Every plan of a seam or section shall show the depth of the seam and the position of the pillars and the nature of the strata.
- (5) Where a seam in a mine is worked in two or more sections every such section shall be deemed to form a separate seam and the parting left between any two such sections or between the workings made in any two seams in a mine which are close to each other, shall not be less than 10 feet in thickness.

Provided that an Inspector may by order in writing—

- (a) permit a smaller thickness of parting, if he is of opinion that the stability of the workings will not be affected thereby, or
- (b) require a greater thickness of parting, if he is of opinion that such greater thickness is necessary for the safety of the workings."

V. After regulation 80, the following regulation shall be inserted, namely:—

" 80-A. If in any mine it appears to an Inspector authorised in this behalf in writing by the Chief Inspector that the requirements of regulation 80 are not being complied with, he may by order in writing require the owner of the mine to take such measures as may be necessary to comply with the requirements of the mine in which protective measures are required to be taken until the requirements specified in the notice are complied with to his satisfaction."

VI. Sub-regulation (3) of regulation 81 shall be omitted.

VII. For regulation 82, the following regulation shall be substituted, namely:—

- " 82. (1) An appeal against any order passed by an Inspector under any of the following regulations, namely, regulations 68, 77, 78, 80, 80-A and 81, may be preferred to the Chief Inspector and the order of the Chief Inspector thereon shall, save as otherwise provided in sub-regulation (2) be final.
- (2) An appeal against any order passed by the Chief Inspector—
- (a) under sub regulations (4) and (5) of regulation 77 or sub regulation (3) of regulation 80; or
- (b) on appeal under sub regulation (1) of this regulation against any order of an Inspector passed under regulations 77, 78, 80 and 80-A, may be preferred to the Central Government, which shall refer the same to a Committee constituted in the manner laid down in sub sections (1) and (2) of section 11 of the Act.
- (3) The procedure laid down in sub-sections (3), (4) and (5) of section 11 of the Act shall apply to a reference made to a Committee under sub-regulation (2).
- (4) Every order against which an appeal is preferred under sub-regulation (2) shall be with pending the receipt at the mine of the decision of the Committee;

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 10—*concl'd.*

Provided that the Committee may, on the application of the appellant, suspend the operation of the order appealed against pending the disposal of the appeal."

VIII. Regulation 84 shall be re-numbered as sub-regulation (2) of that regulation, and before that sub-regulation as so re-numbered, the following sub-regulation shall be inserted, namely:—

"(1) No person shall work in any place in which he has not been ordered to work either by an official of the mine or by a person authorised in this behalf by an official of the mine."

M. S. A. HYDARI,
Secy. to the Government of India.

Statement No. 11.

NOTIFICATION.

New Delhi, the 17th October 1939.

No. M.-955 (1).—In exercise of the powers conferred by Section 5 of the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), the Central Government is pleased—

- (i) to appoint the 1st December 1939 as the date from which the duties of excise referred to in the said section shall be levied and collected;
- (ii) to fix two annas per ton as the rate at which the said duty shall be levied and collected on coal and soft coals; and
- (iii) to fix three annas per ton as the rate at which the said duty of excise shall be levied and collected on hard coke

M. S. A. HYDARI,
Secretary to the Government of India.

Statement No. 12.

CIRCULAR No. 1 of 1939.

Dated Dhanbad, the 21st August 1939.

To

The Manager,

Colliery,

P. O.

It is proposed to amend Bye-law 25 for coal mines. The amended by-law will read as follows:—

"Bye-law 25.—Every person using a safety lamp shall take proper care of it and shall not place it within reach of the swing of any tool. If the lamp becomes damaged he shall at once carefully lower the flame until it is extinguished, and at the first opportunity shall report the damage to the overman or airbar."

As it will take some time to amend the bye law it is requested that you will kindly instruct all users of safety lamps in the proper method of how carefully to lower the flame and extinguish the lamp.

W. KIRBY,
Chief Inspector of Mines in India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 13.

NOTIFICATION.

Simla, the 10th August 1939.

No. M.-955.—In exercise of the powers conferred by section 3 of the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), the Central Government is pleased, with effect from 1st November 1939, to constitute the Coal Mines Stowing Board and to direct that it shall consist of the following members, namely:—

Chairman.

Mr. N. Mahadava Ayyar, I C S. Appointed by the Central Government.

The Chief Inspector of Mines in India (*ex-officio*)

Mr. J. B. Ross of Messrs Shaw Wallace & Company. }
 Mr. C. A. Innes of Messrs Andrew Yule & Company, } Nominated by the Indian Mining Association,
 Limited

Mr. M. N. Mookherjee, M. L. A. (Bihar) Nominated by the Indian Mining Federation.

Mr. A. L. Ojha Nominated by the Indian Colliery Owners' Association.

M. S. A. HYDARI,

Secretary to the Government of India.

Statement No. 14.

NOTIFICATION.

New Delhi, the 17th October 1939.

No. M.-955(2).—In exercise of the powers conferred by section 12 of the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), the Central Government is pleased to make the following rules, the same having been previously published as required by sub-section (1) of the said section, namely:—

COAL MINES SAFETY (STGWING) RULES.

CHAPTER I.

Preliminary.

1. *Short title and extent.*—(1) These rules may be called the Coal Mines Safety (Stowing) Rules, 1939.

(2) They extend to the whole of British India except Assam and the Punjab.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 14—*contd.*

2. *Definitions.*—In these rules, unless there is anything repugnant in the subject or context,—

- (a) "Act" means the Coal Mines Safety (Stowing) Act, 1930 (XIX of 1930);
- (b) "Board" means the Coal Mines Stowing Board;
- (c) "Chairman" means the Chairman of the Board;
- (d) "Committee" means a Committee of Inquiry appointed under section 11 of the Act;
- (e) "Fund" means the Coal Mines Stowing Fund;
- (f) "member" means a member of the Board;
- (g) "section" means a section of the Act

CHAPTER II.

The board and its Procedure.

3. *Co-opted members*—The Board may, under sub-section (1) of section 4, co-opt as members any persons possessing one or more of the following qualifications, namely:—

- (i) A first class colliery manager's certificate of competency, or a degree or diploma in mining or special knowledge in mining affairs.
- (ii) A university degree or equivalent qualification in mechanical, electrical or civil engineering or in fuel technology.
- (iii) A university degree or diploma or equivalent qualification in geology.
- (iv) Qualifications entitling a person to act as auditor of companies under section 144 of the Indian Companies Act, 1913 (VII of 1913)
- (v) Qualifications entitling a person to practise at the bar of a High Court in British India.
- (vi) Experience of not less than 5 years in the management of a Zemindari.

4. *Nomination of members.*—When a vacancy occurs in the Board, a nominated member or

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5. *Term of office*—(1) Save as otherwise provided in these rules, a nominated member shall hold office for three years from the date of his appointment and shall be eligible for re-nomination:

Provided that an outgoing nominated member may continue in office until the appointment of his successor is notified.

(2) A member nominated to fill a casual vacancy or a member appointed by the Central Government on the failure of any body entitled to make a nomination, shall hold office for as long as the member whose place he fills would have been entitled to hold office if the vacancy had not occurred or the nomination had been made, as the case may be

6. *Resignation*—A nominated member may resign his office by letter addressed to the Chairman.

7. *Absence from India*—(1) Before a nominated member leaves India—

- (a) he shall intimate to the Chairman the date of his departure from and the date of his expected return to India; or
- (b) if he intends to be absent from India for a longer period than six months, he shall tender his resignation.

(2) If any nominated member leaves India without taking the action required by sub-rule (1), he shall be deemed to have resigned with effect from the date of his departure from India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 14—*contd.*

8. *Vacation of office*—A nominated member shall be deemed to have vacated his seat on the Board—

- (a) if he becomes bankrupt or insolvent or suspends payment or compounds with his creditors; or
- (b) if he is convicted of any non-bailable offence punishable under the Indian Penal Code (Act XLV of 1860); or
- (c) if he is absent from meetings of the Board during a period of three consecutive months without leave of absence from the Board.

9. *Time and place of meetings*—(1) The Chairman may at any time call a meeting of the Board and shall do so if a requisition for that purpose is presented to him by three or more members

(2) The meetings of the Board shall, unless the Chairman in any case otherwise directs, be held in Calcutta

10. *Notice of meeting*—Not less than seven clear days before the date of any intended meeting of the Board notice of the time and place of such meeting, signed by the Chairman, shall be delivered at or posted to the usual place of residence of every member present in India.

Provided that an emergent meeting may be called by the Chairman at any time, but in such case the Chairman shall inform the members of the subject matter for discussion and the reasons for which he considers it urgent, and at such meeting no business which does not arise directly out of such subject matter shall be introduced or transacted.

11. *Pending at meetings*—The Chairman shall preside at every meeting of the Board at which he is present. If the Chairman is absent from any meeting the members present shall elect one of their number to preside over the meeting and the member so elected shall at that meeting exercise all the powers of the Chairman.

12. *Quorum*—No business shall be transacted at a meeting of the Board unless at least three members are present :

Provided that if at any meeting less than three members attend, the Chairman may adjourn the meeting to a date not less than seven days later and inform the members present and notify other members that he proposes to dispose of the business at the adjourned meeting irrespective of there being a quorum, and it shall thereupon be lawful to dispose of the business at such adjourned meeting irrespective of the number attending

13. *Disposal of business*—(1) Every question upon which the Board is required to deliberate shall be considered either at its meetings or, if the Chairman so directs, by sending the necessary papers to members for opinion :

Provided that the papers need not be sent to any member who is absent from India

(2) When a question is referred for opinion, any member may request that the question be considered at a meeting of the Board, and thereupon, the Chairman may, and if the request is made by three or more members shall, direct that it be so considered.

14. *List of business*—(1) The Chairman shall send to each member present in India, at least seven days before a meeting of the Board, a list of business to be disposed of at that meeting

(2) No business which is not on the list shall be considered at a meeting without the permission of the Chairman.

15. *Decision by majority*—(1) Every question at a meeting of the Board shall be decided by a majority of votes of the members present and voting on that question.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 14—*contd.*

(2) Every question referred to the members for opinion shall, unless the Chairman in pursuance of sub-rule (2) of rule 13 reserves it for consideration at a meeting, be decided in accordance with the opinions of the the majority recording opinions

(3) In the case of an equal division of votes or opinions, the Chairman shall exercise an additional vote or opinion

16 *Record of business.*—A record shall be maintained of all business transacted by the Board copies of which shall be submitted to the Central Government.

17 *Revision.*—(1) The Central Government may for reasons to be recorded in writing review any decision of the Board and pass such orders in the matter as it thinks fit.

(2) The Board shall give effect to all orders passed by the Central Government under sub rule (1).

18. *Salary and allowances of the Chairman.*—(1) The Chairman shall be paid a salary and allowances from the Fund at such rates as may be fixed by the Central Government.

(2) The Chairman shall also be paid from the Fund travelling allowances for journeys performed by him in his official capacity, at the same rates and on the same conditions as are prescribed by rules in the case of officers in the employ of the Central Government drawing the same salary as the Chairman

(3) Contributions on account of the Chairman's pension and leave salary shall be paid from the Fund at such rates as may be fixed by the Central Government.

19 *Powers and duties of the Chairman.*—(1) The Chairman shall be the Principal Executive Officer of the Board and, as such, he shall—

(a) present all important papers and matters to the Board as early as practicable ;

(b) issue orders as to the method of carrying out the decisions of the Board ;

(c) grant or, subject to a resolution by the Board, authorise some other person to grant, receipts on behalf of the Board for all moneys received under the Act ;

(d) maintain or cause to be maintained an account of the receipts and expenditure of the Board ; and

(e) present an annual draft report on the working of the board to the Board for approval and submit the report in the form approved by the Board to the Central Government.

(2) The Chairman may sanction, without reference to the Board, expenditure on contingencies, supplies and services and purchase of articles required for the working of the office of the Board, subject to budget provision and to the condition that the expenditure on any single object does not exceed Rs. 500

20. *Secretary to the Board.*—(1) The Secretary to the Board shall be a person, not being a member, appointed by the Board, with the approval of the Central Government.

(2) The Secretary shall perform such duties as are imposed upon him by these rules and such other duties as may be assigned to him by the Board.

21. *Board's Establishment*—(1) The Board shall, from time to time, fix the scale of establishment and the salaries and allowances of all officers and servants to be employed by it, and may require security to be taken from them in such instances and to such amount as it thinks fit :

Provided that no post the maximum salary of which exceeds rupees five hundred per mensem shall be created without the previous sanction of the Central Government.

(iii) the proposed expenditure classified under the heads specified in sub-rule (3) of rule 33 and such other heads as may be settled at a meeting of the Board.

APPENDIX IV—*concl'd.*Miscellaneous—*concl'd.*Statement No. 14—*concl'd.*

32. *Keeping, auditing and publication of accounts*—(1) The Board shall keep accounts of all moneys received in and expended out of the Fund during each financial year.

(2) Such accounts shall be examined and audited annually, or at such shorter intervals as the Central Government may require, by auditors appointed by the Central Government in this behalf,

(3) The auditors may disallow any item which has in their opinion been expended out of the Fund otherwise than as directed by or under the Act or these rules

(4) If an item of expenditure is disallowed by the auditors, the Central Government may—

(a) either remit the disallowance made by the auditors, or

(b) sanction the expenditure, or

(c) direct that the amount be recovered from the person or persons responsible for the expenditure and credited to the Fund, provided that no recovery under this sub-clause shall be permissible if the expenditure has been incurred in good faith; or

(d) direct that the item disallowed shall be dealt with in such other way as the Central Government may think fit

(5) The audited statement of receipts and expenditure together with the annual report referred to in clause (c) of sub-rule (1) of rule 19 shall be submitted to the Central Government not later than July in each year

(6) An abstract statement of the accounts together with the auditor's report thereon shall be published annually in the Official Gazette

33. *Receipts and Expenditure*.—(1) The accounts of receipts shall be shown under the following heads.—

(a) sum received under section 7,

(b) any other moneys received,

(c) any interest that may have accrued from the investment of such sum or moneys as aforesaid.

(2) Total receipts only shall be shown under each of the heads specified in sub-rule (1) and the opening balance, if any, shall also be stated

(3) Accounts of expenditure shall be shown under the following heads:—

(a) administration of the Board,

(b) other expenditure connected with the administration of the Act,

(c) grant of stowing materials or other assistance for stowing operations to owners, agents or managers of coal mines,

(d) other measures taken in connection with the furtherance of the objects of the Act,

(e) miscellaneous

(4) The closing balance of the year shall be shown at the foot of the accounts on the expenditure side.

(5) In addition to the particulars required by sub-rule (3), separate statements under heads (c) and (d) referred to in that sub-rule shall be drawn up, which shall show the sums paid to each owner, agent or manager of a coal mine independently, or spent otherwise.

M S A. HYDARI,

Secy to the Govt. of India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 14—*contd.*

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ord coke", according to the nature

26 *Weight for charge.*—For the purpose of the levy of the excise duty, the weight of a consignment shall be that taken for the purpose of calculating the freight charges and fractions of a ton shall be rounded off to the nearest ton

27 *Remittance of excise duty.*—The total amount of excise duty collected by each Railway Administration less—

(a) refunds and write-offs, authorised by the Railway Administration under rule 28,

(b) a deduction of such percentage, as the Central Government may, by notification in the Official Gazette, fix, towards the cost of collection,

shall, under advice to the Accountant General, Bengal, be remitted quarterly to the Reserve Bank of India at Calcutta for the credit of the Central Government in a special account.

28 *Refunds and recoveries.*—(1) Where the amount of the excise duty due under these rules has not been collected either wholly or in part or where the amount collected is in excess of the amount due, the Railway Administration shall deal with the undercharge or overcharge, as the case may be, on the same principle as apply to undercharges and overcharges in regard to railway freight charges

(2) The amount of the undercharge or overcharge shall be paid to the Board or any person authorised by the Board on this behalf and the amount so collected, less an amount

29 *Deposit of money.*—The sum of money received under section 7 and any other moneys received by or on behalf of the Board shall be deposited to the credit of the Coal Mines Stowing Fund in the manner provided in rule 30

Provided that the Board may from time to time authorise the retention in the charge of the Chairman or any other person of such sum as it thinks fit as petty cash to meet contingent expenditure

(3) The current account or accounts of the Board shall be maintained in such manner as may be determined by the Board and shall be paid into those accounts

current expenditure may be placed in fixed deposit with any bank or the Central Government or invested in the name of the Board and may lawfully be invested under the Indian Trusts Act, 1882

(4) Of 1882

(3) The placing of money in fixed deposit and the investment thereof and the disposal of moneys so placed or invested shall be subject to the sanction of the Board.

(4) Payments by or on behalf of the Board shall be made in cash or by cheque drawn against a current account of the Board

(5) The cheque referred to in sub-rule (4) and all orders for the making of deposits or investments or for the withdrawal of such deposits or the realization of such investments or for the disposal in any other manner of the funds of the Board shall be signed by the Secretary to the Board and countersigned by the Chairman or by a member authorised by the Board in this behalf.

31. *Budget.*—(1) The Board shall in each year prepare a budget for the ensuing financial year and shall submit it for the sanction of the Central Government on or before the 1st February.

(2) The budget shall include statements of—

(i) the estimated opening balance;

(ii) the estimated receipts under section 7 and from other sources; and

(iii) the proposed expenditure classified under the heads specified in sub-rule (3) of rule 33 and such other heads as may be settled at a meeting of the Board.

APPENDIX IV—*concl'd.*Miscellaneous—*concl'd.*Statement No. 14—*concl'd.*

32 *Keeping, auditing and publication of accounts.*—(1) The Board shall keep accounts of all moneys received in and expended out of the Fund during each financial year

(2) Such accounts shall be examined and audited annually, or at such shorter intervals as the Central Government may require, by auditors appointed by the Central Government in this behalf.

(3) The auditors may disallow any item which has in their opinion been expended out of the Fund otherwise than as directed by or under the Act or these rules

(4) If an item of expenditure is disallowed by the auditors, the Central Government may—

(a) either remit the disallowance made by the auditors, or,

(b) sanction the expenditure, or

(c) direct that the amount be recovered from the person or persons responsible for the expenditure and credited to the Fund, provided that no recovery under this sub-clause shall be permissible if the expenditure has been incurred in good faith; or

(d) direct that the item disallowed shall be dealt with in such other way as the Central Government may think fit

(5) The audited statement of receipts and expenditure together with the annual report referred to in clause (e) of sub rule (1) of rule 19 shall be submitted to the Central Government not later than July in each year.

(6) An abstract statement of the accounts together with the auditor's report thereon shall be published annually in the Official Gazette

33 *Receipts and Expenditure.*—(1) The accounts of receipts shall be shown under the following heads —

(a) sum received under section 7,

(b) any other moneys received,

(c) any interest that may have accrued from the investment of such sum or moneys as aforesaid

(2) Total receipts only shall be shown under each of the heads specified in sub rule (1) and the opening balance, if any, shall also be stated

(3) Accounts of expenditure shall be shown under the following heads —

(a) administration of the Board,

(b) other expenditure connected with the administration of the Act,

(c) grant of stowing materials or other assistance for stowing operations to owners, agents or managers of coal mines,

(d) other measures taken in connection with the furtherance of the objects of the Act,

(e) miscellaneous

(4) The closing balance of the year shall be shown at the foot of the accounts on the expenditure side.

(5) In addition to the particulars required by sub rule (3), separate statements under heads (c) and (d) referred to in that sub rule shall be drawn up, which shall show the sums paid to each owner, agent or manager of a coal mine independently, or spent otherwise.

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